THE GOBLIN SPIDER GENERA *STENOONOPS* AND *AUSTRALOONOPS* (ARANEAE, OONOPIDAE), WITH NOTES ON RELATED TAXA

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CONTENTS

Abstract 3
Introduction 3
Collections Examined 7
Stenoonops Simon. 7
Longoonops, new genus 71
Australoonops Hewitt 86
Acknowledgments 105
References 110
Index of Specific Names 111

ABSTRACT

The goblin spider genus *Stenoonops* Simon is relimited to include those spineless oonopids with a soft abdomen but a well-sclerotized cephalothorax, elevated and pointed sternal extensions separated by distinct grooves, and a dorsal, distal clump of short setae on the male and female palpal tarsi. Most of the 19 species currently assigned to *Stenoonops* belong elsewhere; the 14 misplaced species include members of six other genera. As relimited, *Stenoonops* comprises 23 species and is circum-Caribbean in distribution. The Mediterranean type species of *Oonopinus* Simon, *O. angustatus* (Simon), is poorly known, but none of the New World taxa that have been placed in *Oonopinus* are actually congeneric with *O. angustatus*. *Oonopinus pretiosus* Bryant is transferred to *Stenoonops*; *O. centralis* Gertsch and *O. modestus* Chickering are transferred to *Theotima* (Ochyroceratidae). The genus *Scaphioides* Bryant is removed from the synonymy of *Stenoonops*; *S. minutus* Chamberlin and Ivie from Florida, *S. reductus* (Bryant) and *S. nitens* Bryant from the Virgin Islands, *S. cletus* Chickering and *S. hoffi* Chickering from Jamaica, *S. phonetus* Chickering and *S. econotus* Chickering from Puerto Rico, and *S. halatus* Chickering from Antigua are transferred from *Stenoonops* to *Scaphioides*. Members of two other genera resemble those of *Stenoonops* but lack distinct grooves between the sternal projections. In the new genus *Longoonops*, also circum-Caribbean, the posterior median eyes are elongated and color patterns often occur on the abdomen or legs; *Stenoonops padiscus* Chickering, from Jamaica, is transferred to *Longoonops*. In *Australoonops* Hewitt, the seam between the male palpal bulb and cymbium has been lost; females of the type species, *A. granulatus* Hewitt from South Africa, are described for the first time. New species are described in all three genera, including 17 species of *Stenoonops* (*S. peckorum* from Florida, *S. alazan* and *S. cabo* from Mexico, *S. belmopan* from Belize, *S. murphyorum* from Costa Rica, *S. canita* from Panama, *S. tayrona* and *S. kochalkai* from Colombia and Venezuela, *S. bimini* from the Bahama Islands, *S. mandeville* from Jamaica, *S. jara* from Hispaniola, *S. luquillo* from Puerto Rico, *S.saintjohn*, *S. tortola*, and *S. exgord* from the Virgin Islands, *S. saba* from Saba Island, and *S. simla* from Trinidad), three species of *Longoonops* (*L. bicolor* from Nicaragua and Costa Rica, *L. chickeringi* from Panama, and *L. gorda* from the Virgin Islands), and two species of *Australoonops* (*A. skaife* and *A. haddadi* from South Africa and Mozambique).

INTRODUCTION

The goblin spider genus *Stenoonops* was established by Simon (1891); its type species, *Stenoonops scabriculus* Simon, was based on two males from St. Vincent in the Lesser Antilles, and Simon also assigned a male from his Venezuelan collections to the species. The genus currently includes 18 additional species (see Platnick, 2010, for a full listing); all are from the Caribbean region, except for the wildly misplaced species *Stenoonops opisthornatus* Benoit (1979) from the Seychelle Islands.

Chickering's (1969) study of specimens from Panama and the West Indies is the only substantial paper ever published on the group. Although it covered all but one of the previously known taxa, his survey drew some critical comments from Brignoli (1978b). Chickering provided a brief generic description, but seemingly identified no diagnostic characters for the genus. Even without examining any specimens, Brignoli (1978b: 146, translated) concluded that Chickering's delimitation of the group was unsupported: "*Stenoonops* has been revised by Chickering (1969); in my opinion the recently deceased American author defined the genus too widely: if *Stenoonops* would only consist of the forms that are close to the type species, then besides *S. scabriculus* it would only contain *S. hoffi* Chickering, 1969, *S. lucradus* Chickering, 1969 and maybe *S. cletus* Chickering, 1969."

Our survey of the available material indicates that Brignoli's assessment is correct; the set of oonopids currently placed in *Stenoonops* is a polyphyletic assemblage, including species belonging to six other genera. Moreover, Chickering's treatment of the type species was sufficiently superficial that Brignoli was misled in his conjectures about which species are actually congeneric with *S. scabriculus*; none of the three species he considered as likely members actually belong to *Stenoonops* (nor are they all congeneric with each other).

One of the most distinctive features of *S. scabriculus* and its close relatives is the shape of the sternum, which has elevated and pointed projections extending between the leg coxae; these projections are separated by distinct and conspicuous grooves (figs. 7, 18, 46, 55, 370, 415). Surprisingly, Chickering (1969) illustrated the sternal area for only one species, *Stenoonops noctucus* Chickering, which does not resemble *S. scabriculus* in this regard. The only previously published illustration of this distinctive character was provided by Bryant (1942: fig. 2) for the species she described as *Oonopinus pretiosus* from the Virgin Islands.

In assigning that Virgin Island species to *Oonopinus* Simon (1893b), Bryant was following a tradition established by Simon himself. Although the type species, *Oonopinus angustatus* (Simon, 1882), is from the western Mediterranean, Simon also included in the genus his new species *Oonopinus aurantiacus* from Venezuela. Simon (1893a: 295) noted that these two species have very different male palps, and regarded the two species as belonging to two different subgroups.

Oonopinus has remained among the most poorly defined of oonopid genera; like *Oonops* Templeton (1835), it has been largely a wastebasket group for soft-bodied oonopids. The type species has been treated in the modern literature only by Saaristo and Marusik (2009), who provided two illustrations of the male palp. Unfortunately, Saaristo and Marusik seem to have misconstrued the genus. Simon (1893a) separated *Oonopinus* from *Oonops* primarily because its members (like those of *Stenoonops*) lack leg spines, and subsequent authors have therefore tended to assign any spineless, soft-bodied oonopid to *Oonopinus* (just as they have tended to assign any spiny, soft-bodied species to *Oonops*). The statement by Saaristo and Marusik (2009: 65) that *Oonopinus* species have four or five pairs of tibial spines on the anterior legs is thus completely incongruent with Simon's original concept of the genus.

As is frequently the case with Mediterranean taxa, multiple species seem to have been identified as *O. angustatus*, even within the Simon collection, and resolving the identity of that species will require modern material that can be studied in detail and then compared with the poorly preserved, older specimens. In at least some other groups of soft-bodied oonopids, congeneric species can either have or lack leg spines (Grismado, in press), so *Oonopinus* may turn out to be just a junior synonym of *Oonops* despite the differences in leg spination. Hence the establishment of new, monotypic groups on the basis of minor differences in leg spination, as in the new genus described by Saaristo and Marusik (2009), is ill advised, and unlikely to be phylogenetically accurate.

Brignoli (1978a) discussed at some length the New World species that have been assigned to *Oonopinus*, and concluded that some of these taxa are probably not oonopids at all, but misplaced ochyroceratids. Our examination of the type specimens of *Oonopinus centralis* Gertsch (1941) and *Oonopinus modestus* Chickering (1951), both from Panama, has confirmed Brignoli's conjecture, and those names are here transferred to *Theotima* (Ochyroceratidae), resulting in the new combinations *Theotima centralis* (Gertsch) and *T. modesta* (Chickering). Both names may turn out to be junior synonyms of the widespread, synanthropic, and probably parthenogenetic species *Theotima minutissima* (Petrunkevitch, 1929), which was also initially misidentified as an oonopid and described in *Oonopinus*.

True *Stenoonops* are not abundant in collections; we have been able to examine only about 150 New World specimens. As a result, we have been able to do scanning electron microscopy for only two *Stenoonops* species, and we therefore remain uncertain about the distribution of some of the other distinctive features of these oonopids. Although the legs and palps lack spines, they are provided with thickened setae, which are often conspicuous, especially on the palps of females (figs. 59, 60, 411, 412). The palpal tarsus, in both sexes, is provided with a patch of shortened setae situated distally on the dorsal surface (figs. 9, 28, 61, 387, 414). The leg femora have a slight subdistal constriction, where there is a transverse row of setae (figs. 63, 375). The chelicerae have a median row of smooth setae with thickened tips (figs. 19, 407), and the endites bear flattened setae with forklike tines at their tips (figs. 21, 22, 56, 57, 371, 372).

There are two other genera whose members resemble those of *Stenoonops* in such features, but lack the conspicuous (and presumably synapomorphic) grooves separating the sternal projections that extend between the leg coxae. In one group of species from Central America and the West Indies, the posterior median eyes are elongated (figs. 630, 644) and the abdomen and/or legs often have a distinct color pattern; in *Stenoonops* species, the abdomen is uniformly white, save for the dark, subcutaneous patches often seen near the spinnerets of soft-bodied oonopids (fig. 40), and the legs are uniform in coloration. These species are assigned below to the new genus *Longoonops*.

There are also at least three species from southern Africa that closely resemble *Stenoonops* in having a soft abdomen but a well-sclerotized cephalothorax (fig. 727), a sternum with prolonged extensions between the coxae (but without grooves separating those extensions, fig. 746), a distal setal patch on the dorsum of the palpal tarsi in both sexes (figs. 754, 781), a median row of smooth setae on the chelicerae (fig. 777), and a subdistal femoral constriction with a transverse row of setae (fig. 784). A male of one of these species was apparently first described by Hewitt (1915) as *Australoonops granulatus*. The male palps show a complete fusion of the palpal bulb and cymbium (figs. 752, 753); in American species, there is still a distinct seam between the bulb and cymbium (figs. 8, 10–12, 29, 30, 385, 386). The African species also differ greatly in the microsculpture on the carapace (figs. 741, 742), which has tuberculate sides, and the sternum (fig. 746), which has pits everywhere except the central portion. In American species, in contrast, the sides of the carapace are finely reticulate (figs. 37, 368), the top of the carapace is smooth or finely reticulate (figs. 16, 367), and the sternum is finely reticulate (figs. 18, 55, 370, 415). The flattened setae at the tip of the male endites of *Australoonops* seem to have entire rather than subdivided tips (fig. 743).

We suspect that *Stenoonops*, *Longoonops*, and *Australoonops* together form a monophyletic group, united at least by the distal patch of shortened setae on the palpal tarsus. Because a shortage of specimens has prevented us from examining most of the species by scanning electron microscopy, this hypothesis remains poorly tested and attempting to resolve the relationships among these three genera would be premature. Work in progress on at least four other genera that seem closely related to these taxa may substantially alter the known distribution of some of the relevant features. Although the hypothesized close relationship between the southern African *Australoonops* and the circum-Caribbean genera may seem unusual, our preliminary sorting of specimens belonging to those related taxa indicates that such trans-Atlantic distributions may occur even within a genus, in at least two other cases. These taxa will be detailed in future papers.

Females of many species in the *Stenoonops* complex are sometimes found with seemingly shrunken abdomens, where most of the abdominal contents are separated from the cuticle, sometimes for a considerable distance (figs. 94–97). We suspect that the eggs of these spiders are relatively large, compared to the total body size of the adults, and that the "shrunken" specimens are females that have recently laid eggs and thereby lost a significant portion of their abdominal biomass. This feature was illustrated, for example, in the Old World genus *Khamisia* by Saaristo and van Harten (2006: fig. 18; that figure was unfortunately drawn in a manner that misleadingly suggests that the shrunken parts of the abdomen are a dorsal scutum). The phenomenon may be more widespread within the family; Knoflach et al. (2009: 760) noted that females of *Cortestina thaleri* Knoflach produce egg sacs containing a single egg with a diameter that is larger than the width of the epigastric furrow. As they concluded, "for egg laying the epigastric furrow must be extremely widened in order to release such a large egg and the egg itself must be ductile."

The morphology of *Stenoonops* also raises some issues relevant to the higher-level classification of the family. The traditional version of this classification dates back to Simon (1893a), who recognized two informal groupings of oonopids, the "molles" and the "loricatae." Simon's "Oonopidae molles" contained those species in which the abdomen either lacks scuta entirely, or has them only in the epigastric area, whereas his "Oonopidae loricatae" contained those species with addi-

tional (and more heavily sclerotized) abdominal scuta. Petrunkevitch (1923) and later workers recognized these groups as the subfamilies Oonopinae and Gamasomorphinae, respectively. Although these groups have been used by most workers, their phylogenetic significance has never been established.

Modern work suggests that this dichotomy is not phylogenetically accurate. Among the classical Oonopinae, the genus *Orchestina* Simon (1882) appears to be more basal than *Oonops*, as it retains a well-sclerotized sperm duct within the palp and an H-shaped eye arrangement resembling that of orsolobids. The loss of the sperm duct and the acquisition of a clumped eye arrangement seem synapomorphic, uniting all those oonopids other than *Orchestina* and its possible relatives: *Xiombarg* Brignoli (1979), *Unicorn* Platnick and Brescovit (1995), *Ferchestina* Saaristo and Marusik (2004, which is probably just a baseless name for a highly autapomorphic species of *Orchestina*), and *Cortestina* Knoflach (Knoflach et al., 2009). Chamberlin and Ivie (1942: 6) established a monotypic subfamily Orchestininae, but their total argumentation for that action was: "The genus *Orchestina* is sufficiently distinct from the other genera of the Oonopidae to warrant its separation into a separate subfamily." We do not yet know whether *Orchestina* and the other genera that still retain the plesiomorphic, H-shaped eye pattern actually form a monophyletic group, or whether some of them branch off independently. Nevertheless, there is clearly evidence that Oonopinae, in the sense of including all nongamasomorphines, is paraphyletic at best, because the sperm duct loss and clumped eye arrangement place *Oonops* as more closely related to gamasomorphines than to *Orchestina*.

The question remains, though: what exactly is a gamasomorphine? Specimens of *Gamasomorpha* Karsch (1881) have a heavily sclerotized cephalothorax and multiple, heavily sclerotized abdominal scuta, including an epigastric scutum, a postepigastric scutum, a dorsal scutum, and a spinneret scutum. One could thus argue that to be a gamasomorphine, an oonopid should have all of these characters. However, that is clearly not the sense in which Simon used the term "loricati," as he included in that group *Scaphiella* Simon (1891), females of which lack a dorsal abdominal scutum (and juveniles of which probably have no abdominal scuta at all; Platnick and Dupérré, 2009b). So perhaps gamasomorphines could be diagnosed as containing just those oonopids with a dorsal abdominal scutum in adult males.

There is a problem with this option, however, that goes beyond the resulting inability to sort juveniles and females to subfamily, as there seems to be at least one undescribed South American gamasomorphine group in which the dorsal abdominal scutum of males can be greatly reduced, or even absent, in some species. An alternative view would treat "gamasomorphy" as a syndrome of increasing sclerotization that starts, phylogenetically, with the cephalothorax. Under this view, *Stenoonops* and the other genera treated here would be among the most basal gamasomorphines, rather than oonopines, because of their well-sclerotized cephalothorax. Successive, smaller subgroups of gamasomorphines would then presumably be delimited by the acquisition of a more sclerotized epigastric scutum as well (as in *Scaphioides*, for example), then of a sclerotized dorsal scutum in males (as in *Scaphiella*), and finally of a sclerotized dorsal scutum in females as well (as in *Gamasomorpha*). Sclerotization of the postepigastric, spinneret, and supraanal scuta might also be characters at different levels of the gamasomorphine hierarchy. Of course, the increasing sclerotization is clearly not a single, entirely sequential phenomenon (for example, dorsal scuta in females is a feature that has either evolved at least twice, or been lost in some lineages). But increased sclerotization of each of these body parts, in each sex, offers potential information for grouping various gamasomorphine genera at various levels, so each of these characters should be treated separately in any analysis of oonopid interrelationships.

Our methods follow those of Platnick and Dupérré (2009a, 2009b); the species are treated geographically, by country, proceeding from north to south first on the mainland (United States to Venezuela) and then in the Caribbean (Bahama Islands to Trinidad). Only differences from the males are mentioned in the descriptions of females. All measurements are in mm. Full color and

high-resolution versions of the images, and a distribution map for each species, will be available on the goblin spider Planetary Biodiversity Inventory (PBI) project's website (http://research.amnh.org/oonopidae).

COLLECTIONS EXAMINED

AMG	Albany Museum, Grahamstown, South Africa
AMNH	American Museum of Natural History, New York
CDU	Darrell Ubick collection, San Francisco
FMNH	Field Museum of Natural History, Chicago
FSCA	Florida State Collection of Arthropods, Gainesville
INBIO	Instituto Nacional de Biodiversidad, Santo Domingo, Costa Rica
MCZ	Museum of Comparative Zoology, Harvard University
MHNG	Muséum d'Histoire Naturelle, Geneva, Switzerland
MNHN	Muséum National d'Histoire Naturelle, Paris, France
MIUP	Museo de Invertebrados, Universidad de Panamá
MRAC	Musée Royal de l'Afrique Centrale, Tervuren, Belgium
PPRI	Plant Protection Research Institute, Pretoria, South Africa
SAM	South African Museum, Cape Town, South Africa
UAM	University of Alaska Museum, Fairbanks
USNM	National Museum of Natural History, Smithsonian Institution

Stenoonops Simon

Stenoonops Simon, 1891: 564 (type species by monotypy *Stenoonops scabriculus* Simon).

DIAGNOSIS: Members of this genus can be recognized by their distinctively shaped sternum, with lateral projections (extending between the leg coxae) that are separated by distinct grooves (figs. 18, 55, 370, 415).

DESCRIPTION: Total length of males 1.0–2.2, of females 1.1–2.6; cephalothorax pale orange, legs and palps yellow, abdomen white. CEPHALOTHORAX: Carapace without any pattern, elongate oval in dorsal view, pars cephalica flat in lateral view, anteriorly narrowed to 0.49 times its maximum width or less, with rounded posterolateral corners; posterolateral edge without pits, posterior margin not bulging below posterior rim, anterolateral corners without extension or projections, posterolateral surface without spikes, sides finely reticulate (figs. 16, 37, 367, 368); thorax without depressions, fovea absent, without radiating rows of pits; lateral margin straight, smooth, without denticles; plumose setae near posterior margin of pars thoracica absent; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae absent. Clypeus margin unmodified, straight in front view (figs. 17, 38, 369), sloping forward in lateral view, low, ALE separated from edge of carapace by less than their radius, median projection absent; setae dark, needlelike. Chilum absent. Eyes six, well developed, ALE largest, oval, PME squared, PLE circular; ALE separated by less than their radius, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius; posterior eye row usually straight (figs. 15, 16, 36) but sometimes distinctly recurved. Sternum longer than wide, coloration uniform, fused to carapace, median concavity absent, without hair tufts, with radial furrowlike grooves between coxae I–II, II–III, III–IV (figs. 18, 55, 370, 415), furrow smooth, radial furrow opposite coxae III absent; surface finely reticulate, without pits, microsculpture everywhere but middle, sickle-shaped structures absent; anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension, anterior corners unmodified, lateral margin without infracoxal grooves, distance between coxae II and III greater than distance between coxae I and II, and coxae III and IV, extensions of precoxal triangles absent, lateral margins with three pairs of lateral projections, with posterior hump; setae sparse, dark, spatulate, in group at base of coxae, originating from surface. Chelicerae straight, anterior face unmodified; without teeth on promargin or retromargin;

fang without toothlike projections, directed posteriorly; shape normal, without prominent basal process, tip unmodified; setae dark, spatulate, densest medially; paturon inner margin with pairs of smooth, distally enlarged setae (figs. 19, 407), distal region abruptly narrowed, posterior surface unmodified, promargin with row of flattened setae, laminate groove absent. Labium rectangular, not fused to sternum, anterior margin indented at middle, same as sternum in sclerotization, with six or more setae on anterior margin, subdistal portion with unmodified setae. Endites distally not excavated, same as sternum in sclerotization, usually with anterior modifications in males (including loss of serrula, figs. 20–22, 371–373); females with endites unmodified, with serrula in single row (fig. 408); at least two scanned species with anteromedian margin bearing row of flattened setae with tined tips (figs. 56, 57, 409, 410). Female palp without claw or spines; femur at least sometimes with retrolateral platelike smooth areas (fig. 422), patella without prolateral row of ridges; tibia with three trichobothria (figs. 62, 413); tarsus with thickened setae (figs. 59, 60, 411, 412), dorsal surface of tarsus with distal patch of shortened setae (figs. 61, 414). ABDOMEN: Cylindrical, without long posterior extension, rounded posteriorly, interscutal membrane without rows of small sclerotized platelets; dorsum soft portions without color pattern. Supposed book lung covers large, ovoid, without setae, anterolateral edge unmodified. Posterior spiracles connected by groove. Pedicel tube short, unmodified, scuto-pedicel region unmodified, scutum not extending far dorsal of pedicel, plumose hairs absent, matted setae on anterior ventral abdomen in pedicel area absent, cuticular outgrowths near pedicel absent. Dorsal scutum absent. Epigastric scutum weakly sclerotized, not surrounding pedicel, not protruding (figs. 27, 58), small lateral sclerites absent, without anterolateral joints in females. Postepigastric scutum weakly sclerotized, short, only around epigastric furrow, not fused to epigastric scutum, anterior margin unmodified, without posteriorly directed lateral apodemes. Spinneret scutum absent; supraanal scutum absent. Dorsum setae dark, needlelike; epigastric area frontal setae thickened, dark, needlelike; postepigastric area setae dark, needlelike; dense patch of setae anterior to spinnerets absent. Colulus absent. Spinnerets scanned only in *S. peckorum* (both sexes, figs. 23–26, 51–54) and *S. pretiosus* (female only, fig. 421); ALS with one major ampullate gland spigots and at least one aciniform gland spigot; PMS with one or two spigots; PLS with two to five spigots. LEGS: Femur IV not thickened, same size as femora I–III, femora of scanned species with subdistal constriction bearing transverse dorsal row of setae (figs. 63, 375); patella plus tibia I shorter than carapace, dorsal surface of patellae at least sometimes with row of platelike areas (fig. 64); tibia I unmodified, tibia IV specialized hairs on ventral apex absent, tibia IV ventral scopula absent; metatarsi I and II mesoapical comb absent, metatarsi III and IV weak ventral scopula absent. Leg spines absent. Superior claws with few large, proximally situated teeth on lateral surfaces, numerous tiny, closely packed, distally situated teeth on median surfaces (figs. 35, 376–378, 423–425), inferior claw absent. Trichobothrial bases rounded, hood with few ridges, aperture internal texture not gratelike, hood smooth (fig. 65). Tarsal organ of legs I, II, palp with three sensillae, of legs III, IV with two sensillae, distal margin sometimes internally gratelike (figs. 33, 34, 66–70, 379–383, 426–430). GENITALIA: Male epigastric region with sperm pore not visible; furrow without Ω-shaped insertions, without setae. Male palp of normal size, not strongly sclerotized, right and left palps symmetrical, embolus light, without prolateral excavation; trochanter of normal size, unmodified; femur two or more times as long as trochanter, without posteriorly rounded lateral dilation, attaching to patella basally; patella shorter than femur, not enlarged, without prolateral row of ridges, setae unmodified; tibia short, with three dorsal trichobothria (figs. 32, 384), cymbium ovoid in dorsal view, fused with bulb but retaining seam, seam often most conspicuous proximally or distally (figs. 29, 30, 385, 386), not extending beyond distal tip of bulb, plumose setae absent, thickened setae present, with distal patch of shortened setae (figs. 28, 387); bulb 1–1.5 times as long as cymbium, stout, tapering apically; embolus elaborate (fig. 31). Internal female genitalia with anterior and

posterior receptacula, anterior receptaculum often with variously shaped, sclerotized anterior projection (figs. 417–420).

MISPLACED SPECIES: Chickering (1969) placed *Scaphioides* Bryant (1942) as a junior synonym of *Stenoonops*, but the type species of *Scaphioides* has neither the distinctive sternal modifications nor the palpal tarsal setae characteristic of true *Stenoonops*. Eight of the 17 species placed in *Stenoonops* by Chickering, including the type species of *Scaphioides*, are united by a distinctive male palpal morphology with a short, wide embolus, and by having the female epigastric and postepigastric scuta more strongly sclerotized than in true *Stenoonops*. *Scaphioides* is therefore here removed from the synonymy of *Stenoonops* and regarded as a valid genus, containing the following species, all transferred from *Stenoonops*: *Scaphioides minuta* (Chamberlin and Ivie, 1935), new combination, from Florida; *Scaphioides reducta* Bryant (1942) and *Scaphioides nitens* (Bryant, 1942), new combination, from the Virgin Islands; *Scaphioides cletus* (Chickering, 1969), new combination, and *Scaphioides hoffi* (Chickering, 1969), new combination, from Jamaica; *Scaphioides phonetus* (Chickering, 1969), new combination, and *Scaphioides econotus* (Chickering, 1969), new combination, from Puerto Rico, and *Scaphioides halatus* (Chickering, 1969), new combination, from Antigua.

Stenoonops portoricensis Petrunkevitch (1929) from Puerto Rico and two other species described by Chickering (1969), *Stenoonops lucradus* and *Stenoonops noctucus*, both from the Virgin Islands, do not fit the diagnoses given above, and belong neither to *Stenoonops* nor *Scaphioides*. There are also two other species currently assigned to *Stenoonops* that were not considered by Chickering (1969). *Stenoonops egenulus* Simon (1893b) was based on a female from Venezuela that is now badly faded and worn, but appears to lack the sternal conformation and palpal tarsal setae characteristic of *Stenoonops*; it definitely has leg spines on tibiae and metatarsi IV, has very differently constructed genitalia, and thus clearly belongs elsewhere, closer to the other New World taxa currently misplaced in *Oonops*. More recently, Benoit (1979) described *Stenoonops opisthornatus* for a female from the Seychelle Islands that appears to have almost nothing in common with true *Stenoonops*. All these species misplaced in *Stenoonops* will be covered in future papers by various PBI participants.

DISTRIBUTION: Circum-Caribbean; the new species *S. cabo*, from Baja California, is the outlier, farthest removed from the Caribbean.

Key to Species of *Stenoonops*

1. Posterior eye row recurved (as in figs. 264, 274, 307) 2
– Posterior eye row straight or slightly procurved 4
2. Males (embolus longer than palpal bulb, fig. 313; females unknown). . . . *S. macabus*
– Females 3
3. Female genitalia with winglike anterolateral extensions (figs. 277, 278), males unknown. . . . . *S. mandeville*
– Female genitalia with armchair-shaped anterolateral extensions (figs. 267, 268), males unknown . . . . . *S. dimotus*
4. Carapace posterior declivity acute, pars cephalica slightly elevated (as in figs. 121, 156) 5
– Carapace posterior declivity obtuse, pars cephalica flat (as in figs. 43, 75) 17
5. Males. 6
– Females 12
6. Endites with two long, posteriorly directed macrosetae (fig. 286, Jamaica) . . . *S. insolitus*
– Endites without such macrosetae 7
7. Palpal bulb enlarged, embolus very short (figs. 541, 542, Trinidad) . . . . . *S. simla*
– Palpal bulb not enlarged, embolus long . . . 8
8. Embolus sinuous, accompanied by large transparent conductor (figs. 116, 139) . . . 9
– Embolus not accompanied by large transparent conductor 10
9. Embolus apex bifid (figs. 138, 139, Costa Rica and Panama). . . . . *S. petrunkevitchi*
– Embolus apex undivided (figs. 115, 116, Costa Rica) . . . . . *S. murphyorum*
10. Embolus apex deeply forked (figs. 206, 207, Colombia and Venezuela) . . . . . *S. tayrona*
– Embolus otherwise 11
11. Embolus with large dorsal process (figs. 183, 184, Panama) . . . . . *S. canita*
– Embolus with short, triangular dorsal process (figs. 234, 235, Colombia) . . . . *S. kochalkai*
12. Anterior genitalic projection elongated, widening apically (figs. 125, 301) 13
– Anterior genitalic projection bulbous (as in figs. 193, 194) 14

13. Anterior genitalic projection with W-shaped base (figs. 301, 302, Jamaica) . . . *S. insolitus*
– Anterior genitalic projection with straight base (figs. 125, 126, Costa Rica). . . . *S. murphyorum*
14. Anterior genitalic projection bipartite (figs. 193, 194, Panama). . . . . *S. canita*
– Anterior genitalic projection undivided . . . 15
15. Anterior genitalic projection widest at midpoint (figs. 553, 554, Trinidad) . . . . *S. simla*
– Anterior genitalic projection not widest at midpoint 16
16. Anterior genitalic projection very short, basally widened (figs. 220, 221, Colombia and Venezuela) . . . . . *S. tayrona*
– Anterior genitalic projection bulbous, basally narrowed (figs. 170, 171, Costa Rica and Panama). . . . . *S. petrunkevitchi*
17. Males. 18
– Females 27
18. Palpal bulb small, embolus sinuous, widening apically (figs. 325, 326, females unknown, Hispaniola). . . . . *S. jara*
– Palpal bulb large, embolus otherwise. . . . 19
19. Embolus narrow, bent basally (figs. 92, 93, Mexico) . . . . . *S. cabo*
– Embolus otherwise 20
20. Embolus with dorsal lobe 21
– Embolus without dorsal lobe. 22
21. Embolus tip rounded (figs. 247, 248, Bahama Islands) . . . . . *S. bimini*
– Embolus tip pointed (figs. 13, 14, Florida) . . . . . *S. peckorum*
22. Distal half of embolus curved dorsally (figs. 516, 517, Guadeloupe, St. Vincent, and Venezuela) . . . . . *S. scabriculus*
– Embolus otherwise 23
23. Embolus short, tubular, with retrolateral opening (figs. 363, 364, St. Croix) *S. pretiosus*
– Embolus otherwise. 24
24. Embolus with pointed tip accompanied by prolateral process with indented tip (figs. 340, 341, Puerto Rico) . . . . . *S. luquillo*
– Embolus otherwise 25
25. Embolus constricted medially (retrolateral view, fig. 472, Tortola and Little Thatch Island) . . . . . *S. tortola*
– Embolus not constricted medially 26
26. Embolus accompanied by basal, prolateral pointed process (figs. 493, 494, Virgin Gorda). . . . . *S. exgord*
– Embolus without prolateral pointed process (figs. 442, 443, St. Thomas and St. John) . . . . . *S. saintjohn*
27. Female genitalia with narrow anterolateral extensions (figs. 257, 258, Bahama Islands) . . . . . *S. bimini*
– Female genitalia without anterolateral extensions 28
28. Anterior genitalic projection Y-shaped (figs. 102, 103, Belize) . . . . . *S. belmopan*
– Anterior genitalic projection otherwise. . . 29
29. Genitalia with anterior poreplate (figs. 350, 405) 30
– Genitalia without anterior poreplate 31
30. Genitalia narrowed immediately behind poreplate (figs. 405, 406, St. Croix). *S. pretiosus*
– Genitalia not narrowed immediately behind poreplate (figs. 350, 351, Puerto Rico). . . . . *S. luquillo*
31. Genitalia with two anterior projections (figs. 47, 48, Florida). . . . . *S. peckorum*
– Genitalia with one anterior projection. . . 32
32. Anterior genitalic projection bulbous (figs. 79, 80, Mexico). . . . . *S. alazan*
– Anterior genitalic projection long, narrow . . . 33
33. Anterior genitalic projection originating from a rectangular base (figs. 452, 453, St. Thomas and St. John) . . . . . *S. saintjohn*
– Anterior genitalic projection not originating from a rectangular base 34
34. Genitalia with triangular posterior receptaculum (figs. 503, 504, Saba Island) . . . *S. saba*
– Genitalia otherwise 35
35. Anterior genitalic projection basally broadened (figs. 530, 531, Guadeloupe, St. Vincent, and Venezuela) . . . . . *S. scabriculus*
– Anterior genitalic projection apically broadened. 36
36. Anterior genitalic projection relatively long, narrow (figs. 395, 396, Virgin Gorda) . . . . . *S. exgord*
– Anterior genitalic projection shorter, wider (fig. 481, Tortola and Little Thatch islands). . . . . *S. tortola*

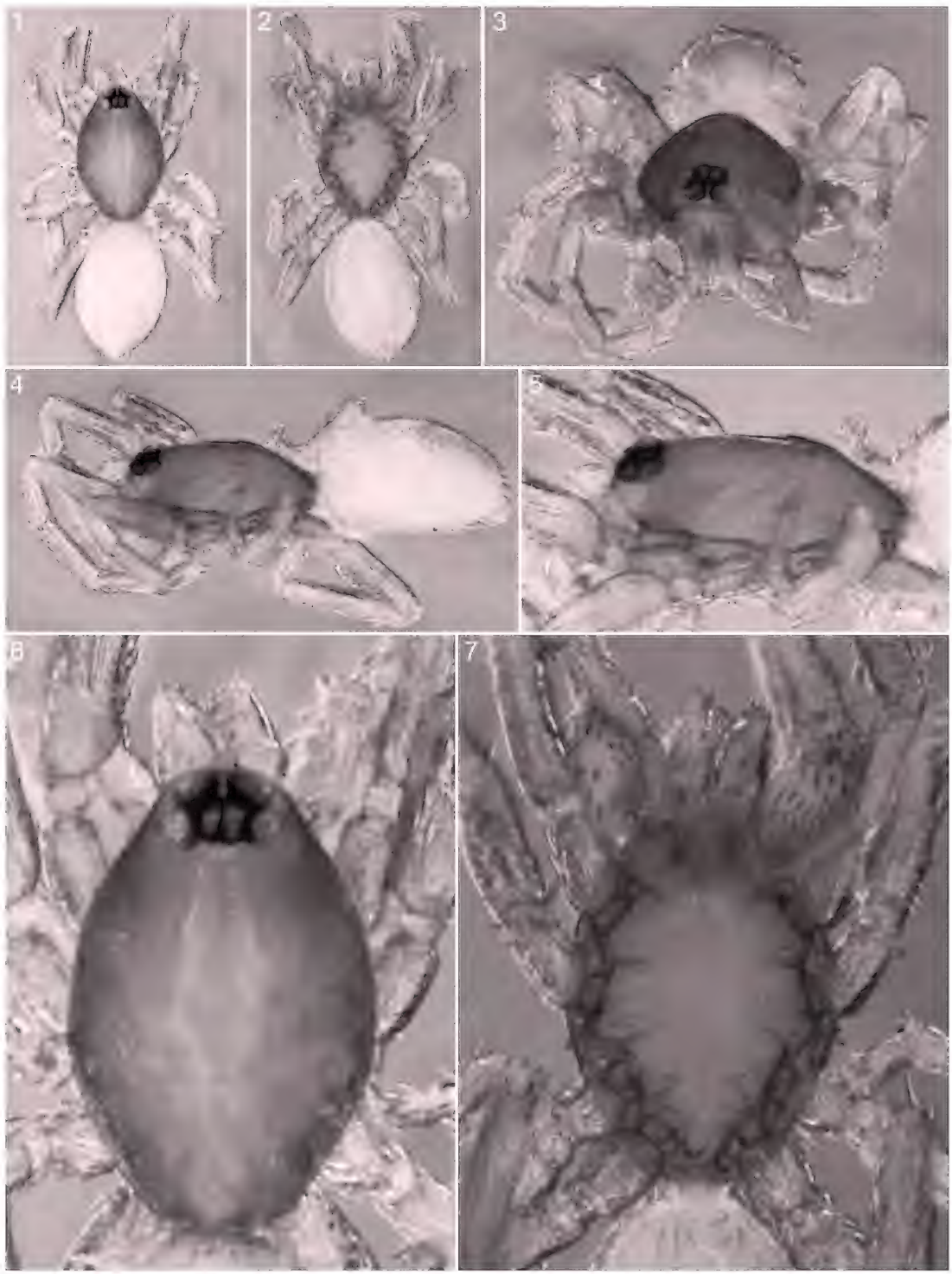
Stenoonops peckorum, new species
Figures 1–70

TYPES: Male holotype and female allotype taken in Berlese sample from Upper Matecumbe Key, Islamorada, Monroe Co., Florida (Aug. 8, 1971; S. Peck), deposited in AMNH (PBI_OON 21134).

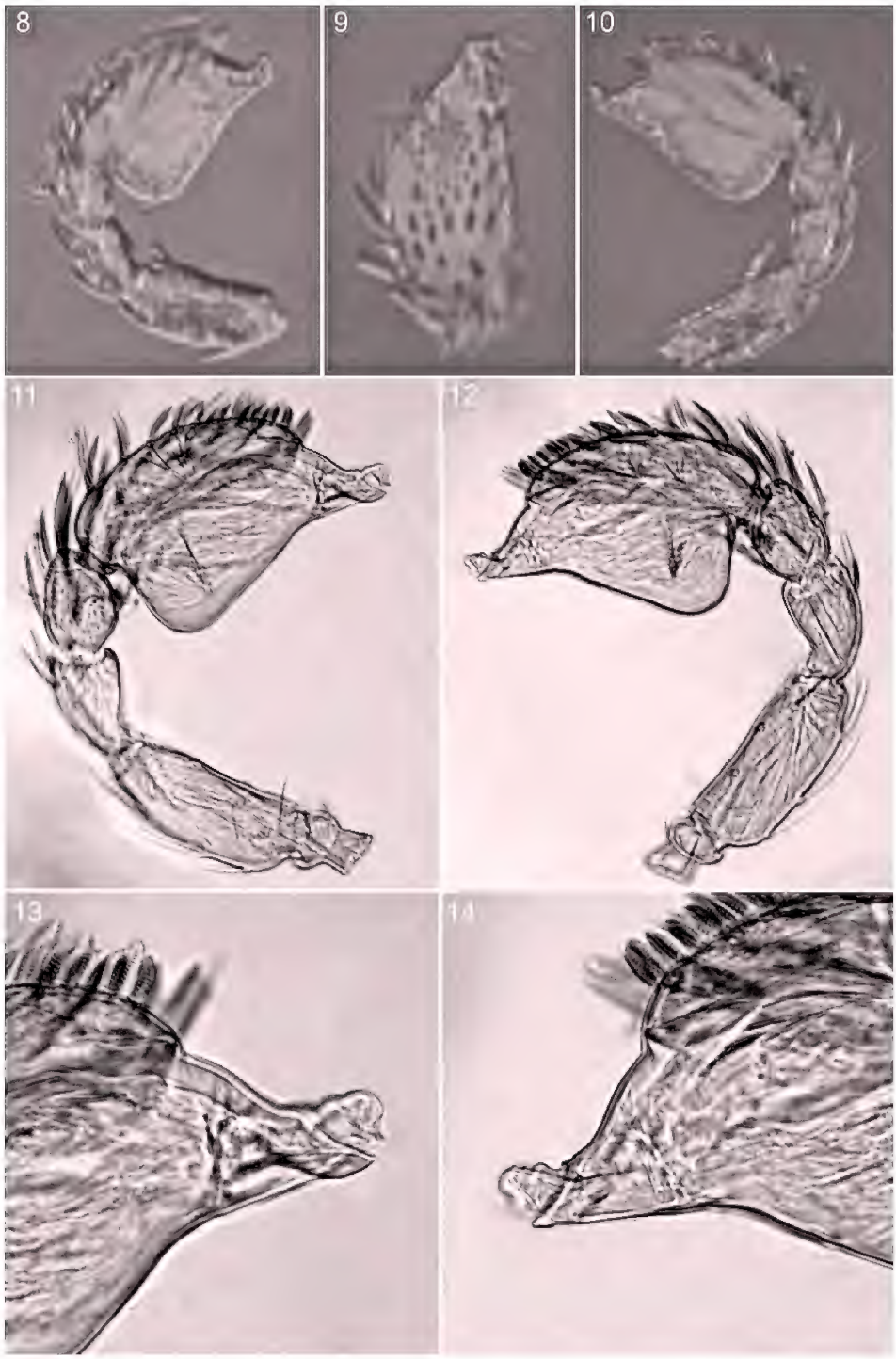
ETYMOLOGY: The specific name is a patronym for Stewart and Jarmila Peck, collectors of this and many other unusual oonopids.

DIAGNOSIS: Males can be recognized by the relatively wide embolus accompanied by a membranous dorsal lobe (figs. 13, 14), females by the presence of anterior projections on both the ventral and dorsal surfaces of the genitalia (figs. 47–50).

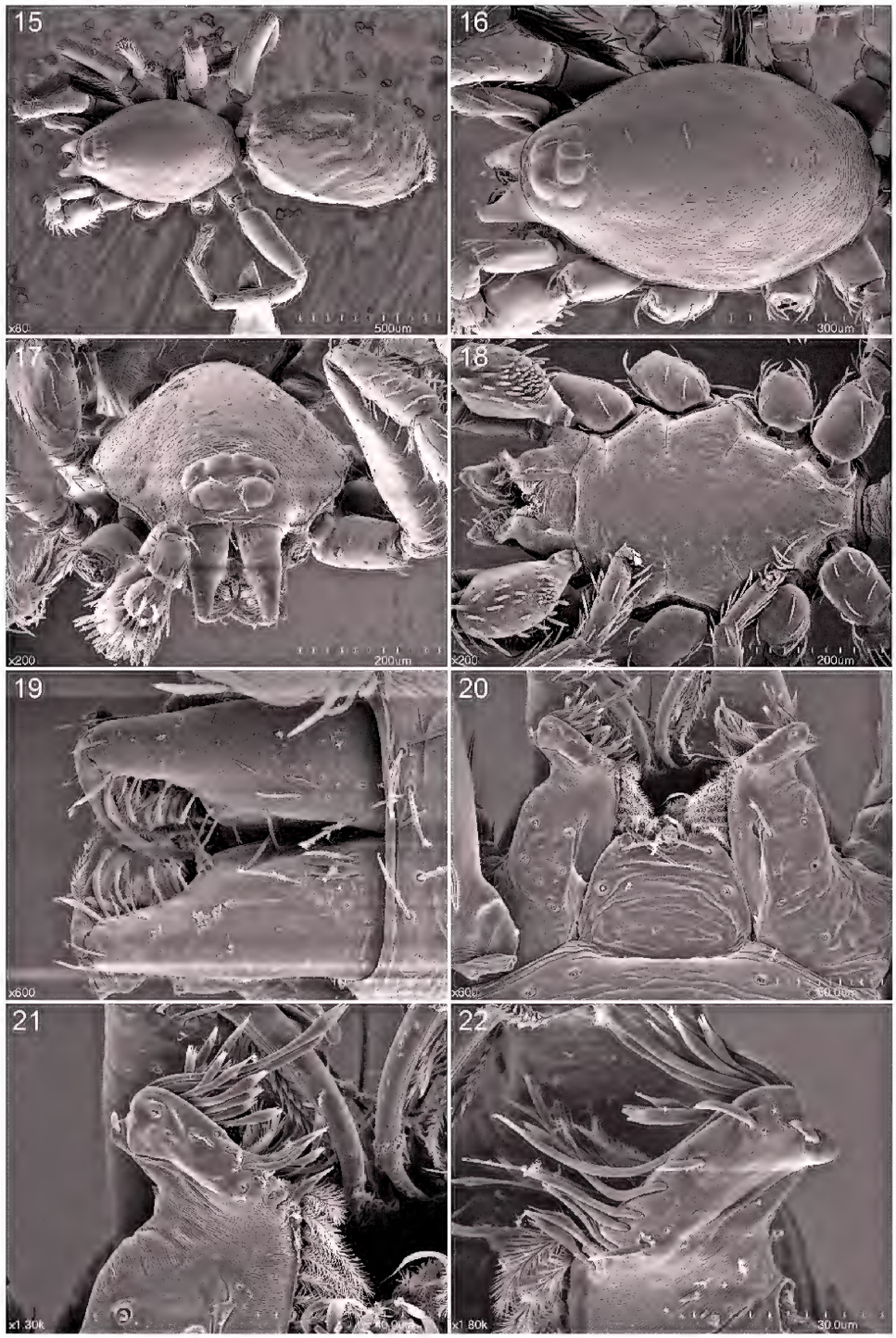
MALE (PBI_OON 38036, figs. 1–35): Total length 1.19. Elevated portion of pars



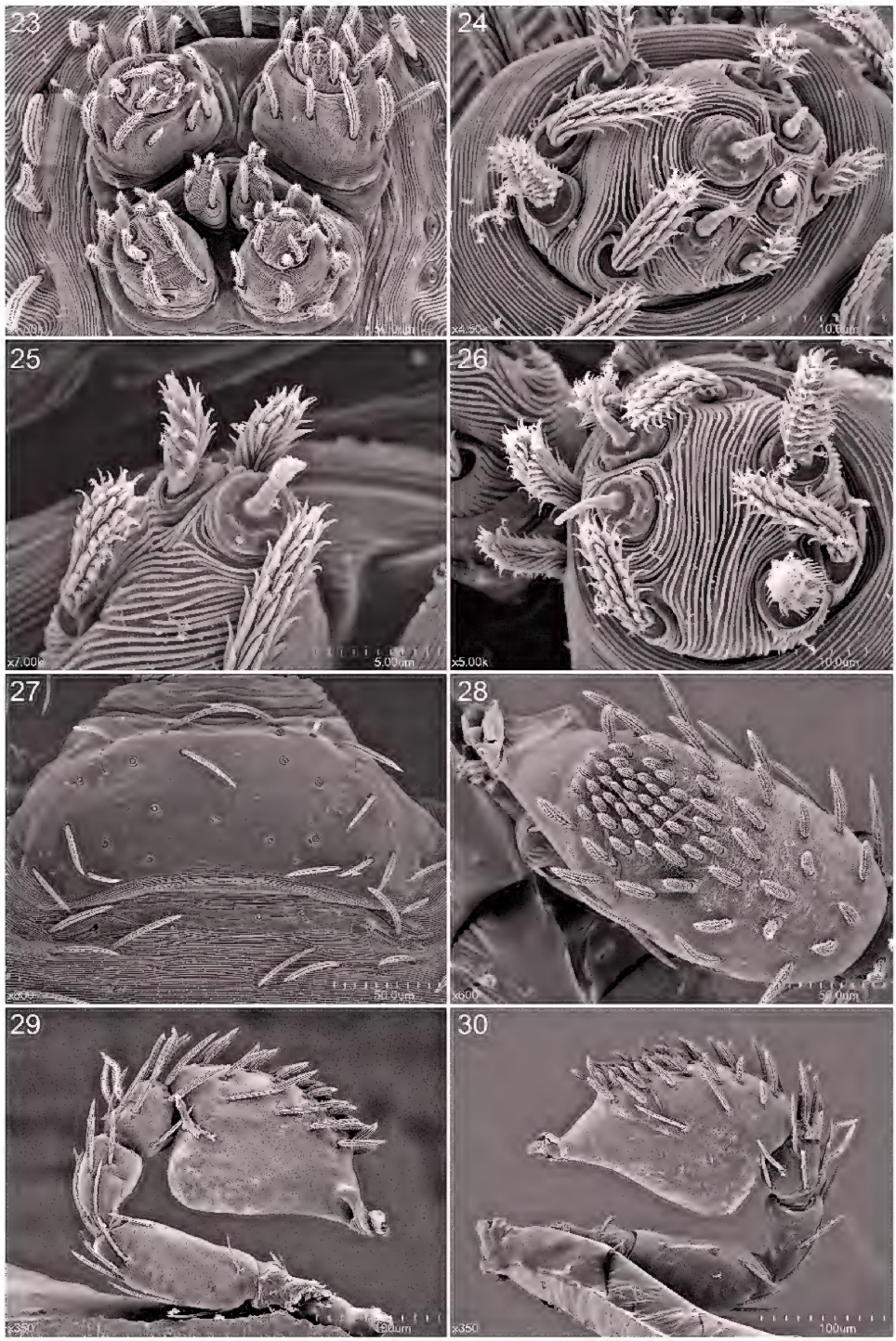
Figs. 1–7. *Stenoonops peckorum*, new species, male. **1.** Habitus, dorsal view. **2.** Same, ventral view. **3.** Same, anterior view. **4.** Same, lateral view. **5.** Carapace, lateral view. **6.** Same, dorsal view. **7.** Sternum, ventral view.



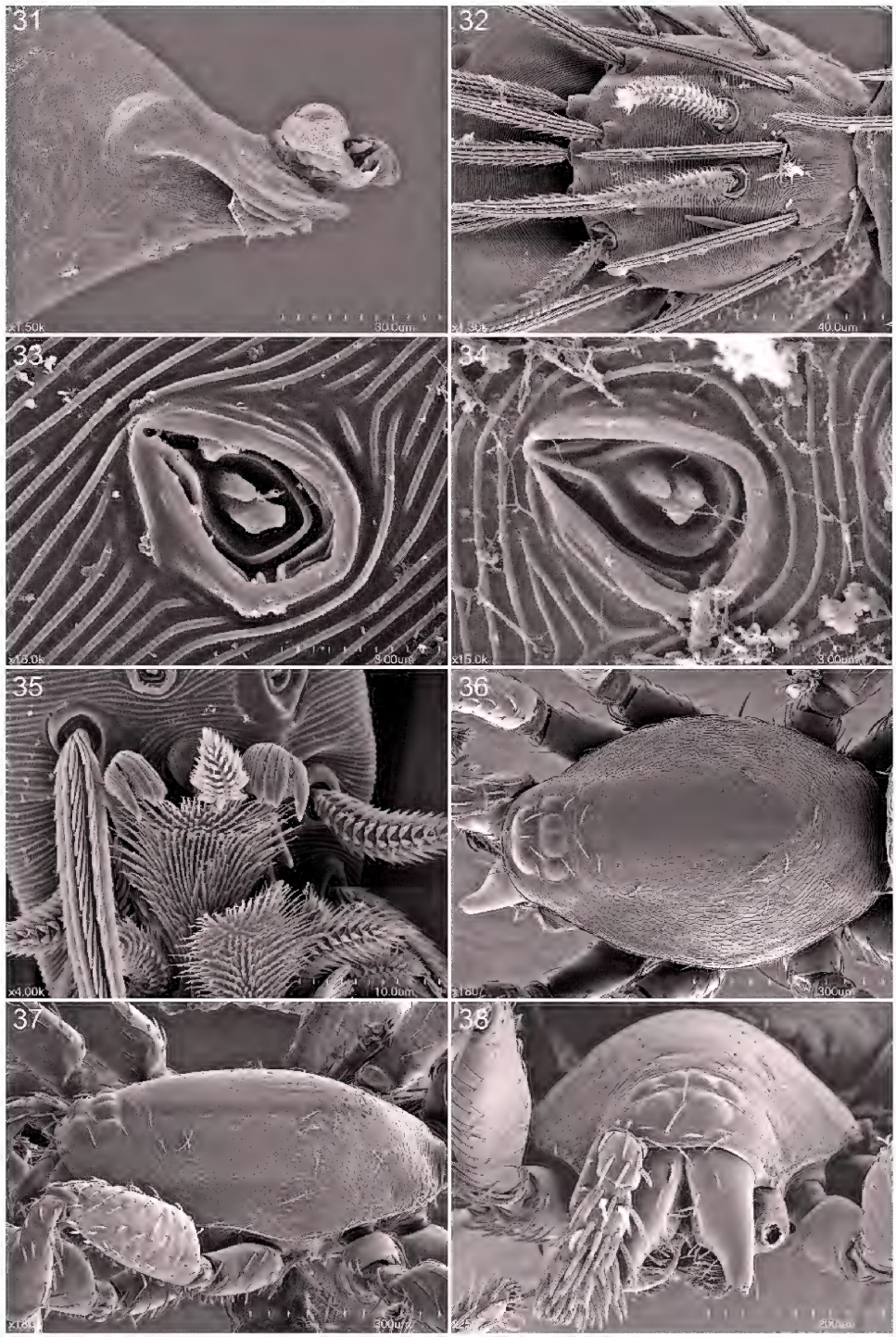
Figs. 8–14. *Stenoonops peckorum*, new species, left male palp. **8.** Prolateral view (stereoscope). **9.** Dorsal view (same). **10.** Retrolateral view (same). **11.** Prolateral view (compound microscope). **12.** Retrolateral view (same). **13.** Embolus, prolateral view (same). **14.** Embolus, retrolateral view (same).



Figs. 15–22. *Stenoonops peckorum*, new species, male, scanning electron micrographs. **15.** Habitus, dorsal view. **16.** Carapace, dorsal view. **17.** Same, anterior view. **18.** Sternum, ventral view. **19.** Chelicerae, anterior view. **20.** Labium and endites, ventral view. **21.** Right endite, same. **22.** Left endite, same.



Figs. 23–30. *Stenoonops peckorum*, new species, male, scanning electron micrographs. **23.** Spinnerets, posterior view. **24.** Anterior lateral spinneret, same. **25.** Posterior median spinneret, same. **26.** Posterior lateral spinneret, same. **27.** Epigastric area, ventral view. **28.** Left palp, dorsal view. **29.** Same, prolateral view. **30.** Same, retrolateral view.



Figs. 31–38. *Stenoonops peckorum*, new species, scanning electron micrographs. **31.** Male, left embolus, prolateral view. **32.** Male, left palpal tibia, dorsal view. **33.** Male, leg III, tarsal organ, same. **34.** Male, palpal tarsus, same. **35.** Male, leg III, claws, distal view. **36.** Female, carapace, dorsal view. **37.** Same, lateral view. **38.** Same, anterior view.

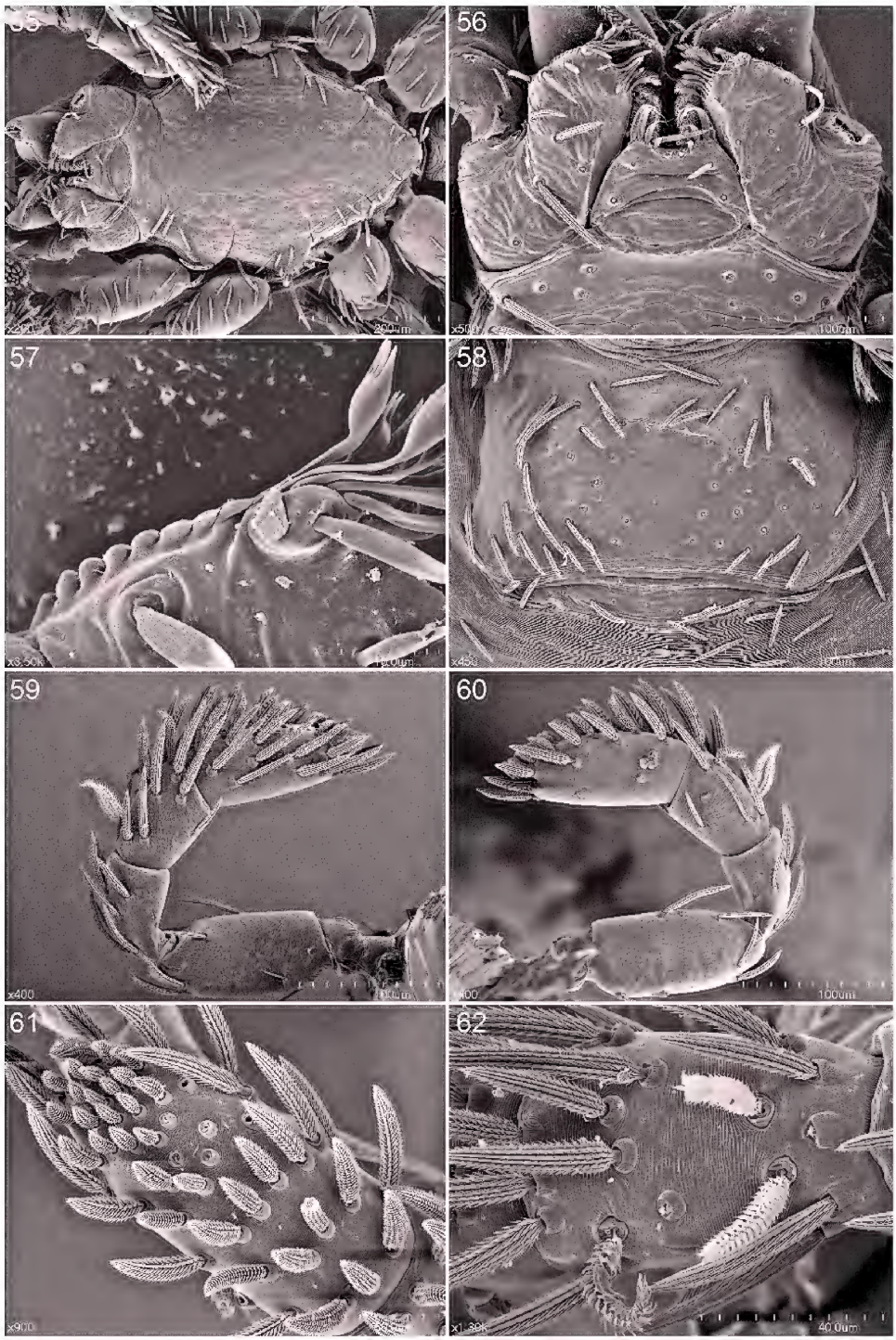
Figs. 39–46. *Stenoonops peckorum*, new species, female. **39.** Habitus, dorsal view. **40.** Same, ventral view. **41.** Same, anterior view. **42.** Same, lateral view. **43.** Carapace, lateral view. **44.** Same, dorsal view. **45.** Epigastric area, ventral view. **46.** Sternum, ventral view.

cephalica smooth; posterior eye row straight from above, procurved from front. Endites subdistally excavated. Embolus tip elaborate (figs. 13, 14).

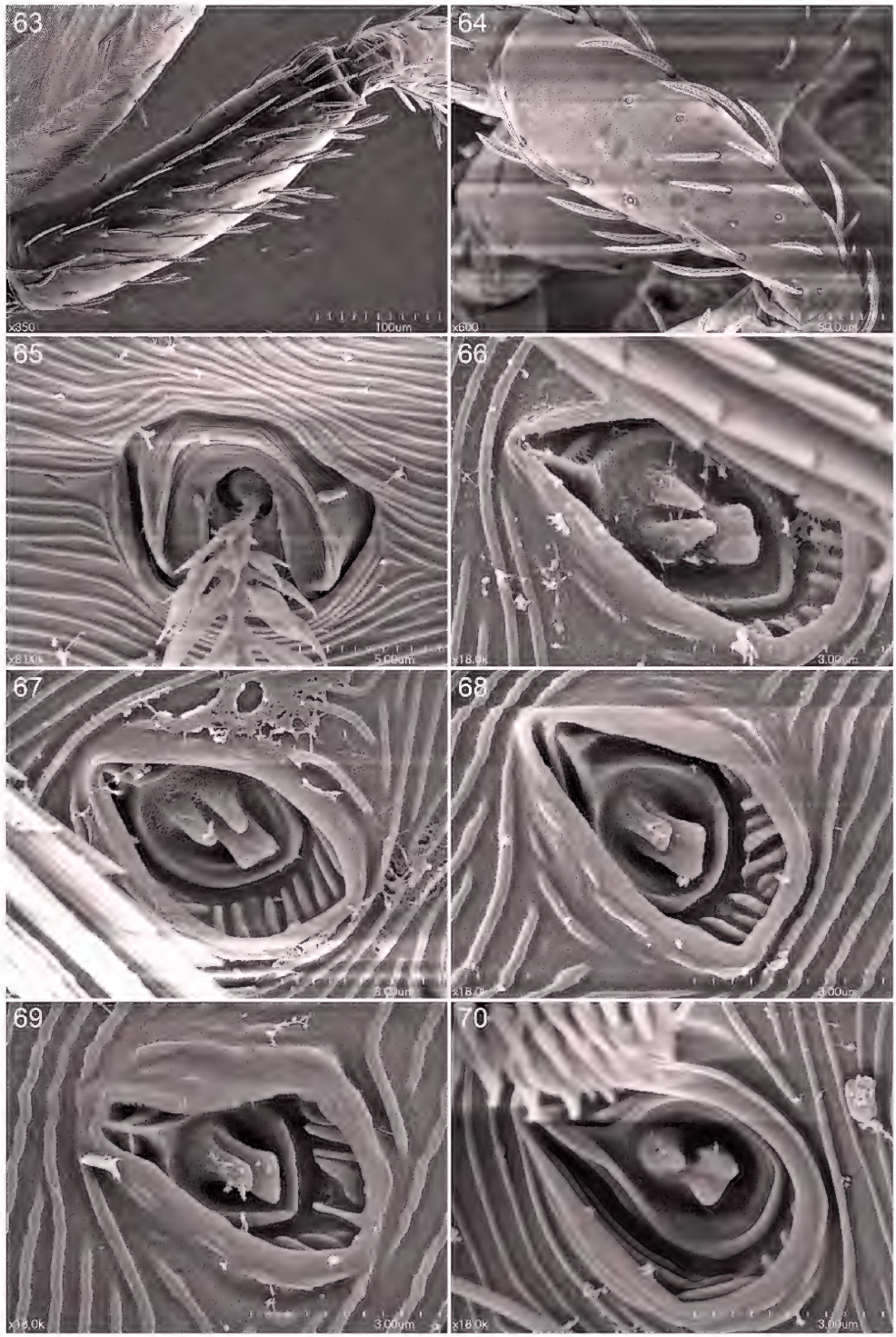
FEMALE (PBI_OON 38035, figs. 36–70): Total length 1.22. Genitalia with ventral and dorsal anterior projections, ventral one distally widened, dorsal one subdistally widened (figs. 47–50).

OTHER MATERIAL EXAMINED: UNITED STATES: **Florida:** *Monroe Co.:* Big Pine Key, Cactus Hammock, July 30, 1985, hammock

Figs. 47–54. *Stenoonops peckorum*, new species, female. **47.** Genitalia, PBI_OON 38035, ventral view. **48.** Same, dorsal view. **49.** Genitalia, PBI_OON 21134, ventral view. **50.** Same, dorsal view. **51.** Spinnerets, posterior view. **52.** Anterior lateral spinneret, same. **53.** Posterior median spinneret, same. **54.** Posterior lateral spinneret, same.



Figs. 55–62. *Stenoonops peckorum*, new species, female. **55.** Sternum, ventral view. **56.** Labium and endites, same. **57.** Right endite tip, same. **58.** Epigastric area, same. **59.** Left palp, prolateral view. **60.** Same, retrolateral view. **61.** Left palpal tarsus, dorsal view. **62.** Left palpal tibia, same.



Figs. 63–70. *Stenoonops peckorum*, new species, female, dorsal view. **63.** Femur IV. **64.** Patella II. **65.** Tibia II, trichobothrium. **66.** Tarsal organ, leg I. **67.** Same, leg II. **68.** Same, leg III. **69.** Same, leg IV. **70.** Same, palp.

forest litter (S., J. Peck, AMNH PBI_OON 1278), 1♀; John Pennekamp Coral Reef State Park, July 31, 1985, hammock forest, leaf litter (AMNH PBI_OON 37966), 1♀, Dec. 10, 1986, hardwood hammock forest litter (Klimaszewski, Peck, AMNH PBI_OON 37993, 38034), 2♂; Key Vaca, Marathon, Dec. 13, 1986, hammock litter (Klimaszewski, Peck, AMNH PBI_OON 38037), 1♀; Little Torch Key, Torchwood Hammock, Jolly Roger Estate, Nov. 2007 (P. Sierwald, FMNH 34833, PBI_OON 10550), 1♂, 1♀; Upper Matecumbe Key, Islamorada, Aug. 8, 1971, Berlese (S. Peck, AMNH PBI_OON 21134), 2♂, 2♀, Aug. 30, 1986, hammock forest litter (S., J. Peck, AMNH PBI_OON 21128), 2♀; Watsons Hammock, Big Pine Key, June 3–Aug. 27, 1986, hammock forest malaise flight intercept (S., J. Peck, AMNH PBI_OON 378), 1♂, Aug. 28–Dec. 13, 1986, forest malaise flight intercept trough (S., J. Peck, AMNH PBI_OON 21127), 1♀, Dec. 11, 1986, forest litter (Klimaszewski, Peck, AMNH PBI_OON 38036), 2♂,1♀, Dec. 14, 1986, hammock forest litter (Klimaszewski, Peck, AMNH PBI_OON 38035), 1♂, 2♀; Windley Key, Nov. 18, 1985, hammock forest litter (S., J. Peck, AMNH PBI_OON 38002), 1♀.

DISTRIBUTION: Far southern Florida.

Stenoonops alazan, new species
Figures 71–80

TYPE: Female holotype from Alazán, Veracruz, Mexico (Aug. 15, 1959; Menke, Stange), deposited in AMNH (PBI_OON 1047).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females can be recognized by the shape of the anterior genitalic projection, which is distally expanded for about half its length (figs. 79, 80).

MALE: Unknown.

FEMALE (PBI_OON 1047, figs. 71–80): Total length 1.25. Elevated portion of pars cephalica reticulate; posterior eye row straight from above, procurved from front. Genitalia with procurved basal plate; anterior projection expanded over distal half of its length (figs. 79, 80).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Mexico.

Stenoonops cabo, new species
Figures 81–93

TYPE: Male holotype taken under granite in a thorn forest 6 mi W of San Jose del Cabo, Baja California Sur, Mexico (Jan. 7, 1982; D. Ubick), deposited in CAS (PBI_OON 36357).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males can be recognized by the relatively narrow, ventrally projecting embolus (figs. 88–93).

MALE (PBI_OON 36357, figs. 81–93): Total length 1.25. Elevated portion of pars cephalica smooth; posterior eye row straight from above, procurved from front. Endites with lateral margins abruptly narrowed at about two-thirds their length. Embolus originating subdistally, tip incised dorsally (figs. 88–93).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: One male taken with the holotype (CDU).

DISTRIBUTION: Mexico.

Stenoonops belmopan, new species
Figures 94–103

TYPE: Female holotype from a Berlese sample of limestone forest litter taken 2.5 mi S of Belmopan, Cayo, Belize (Aug. 4, 1972; S., J. Peck), deposited in FMNH (33616, PBI_OON 10123).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females can be recognized by the Y-shaped anterior genitalic projection (figs. 102, 103).

MALE: Unknown.

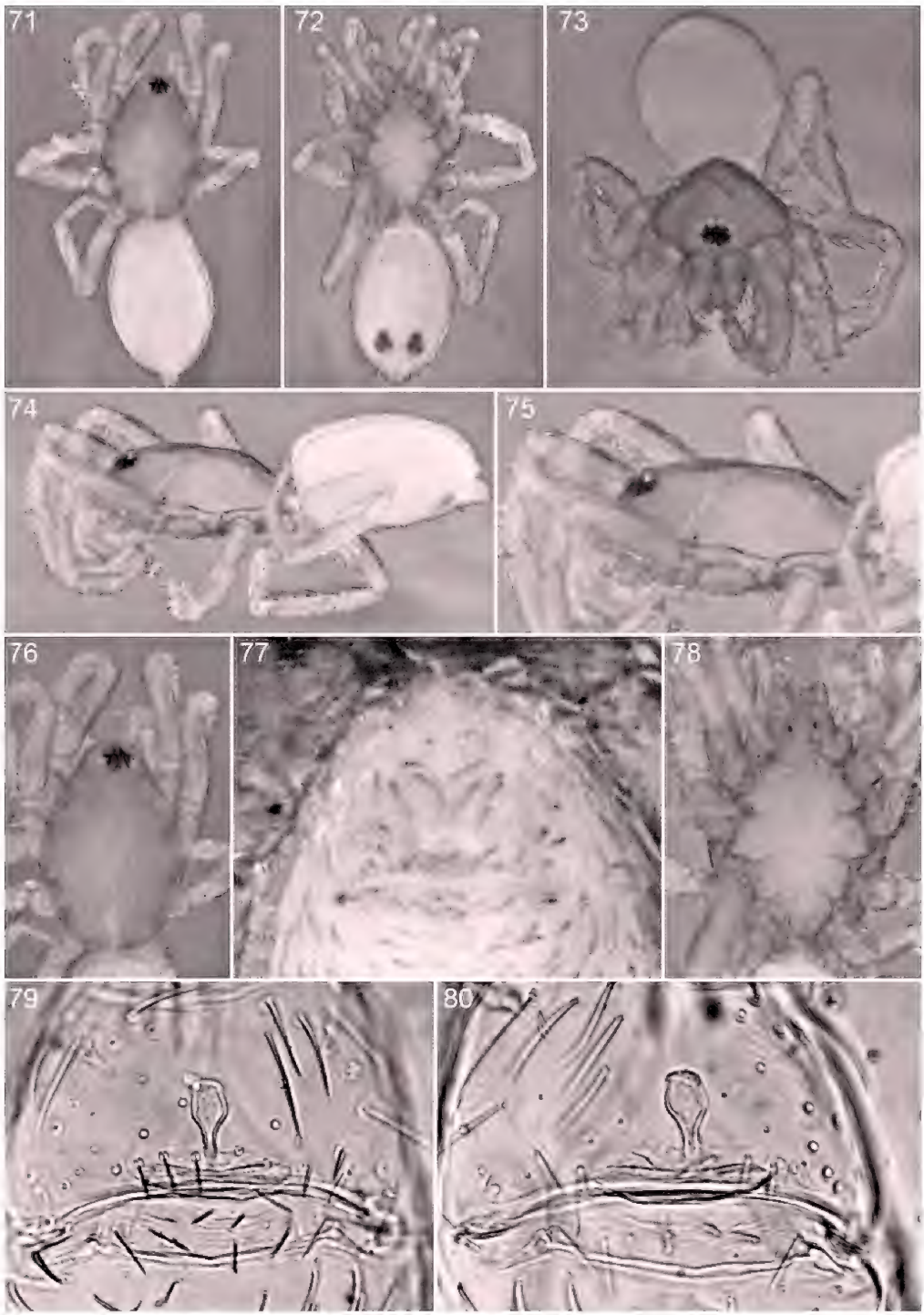
FEMALE (PBI_OON 10123, figs. 94–103): Total length 2.46. Elevated portion of pars cephalica reticulate; posterior eye row straight from above, procurved from front. Anterior genitalic projection Y-shaped (figs. 102, 103).

OTHER MATERIAL EXAMINED: None.

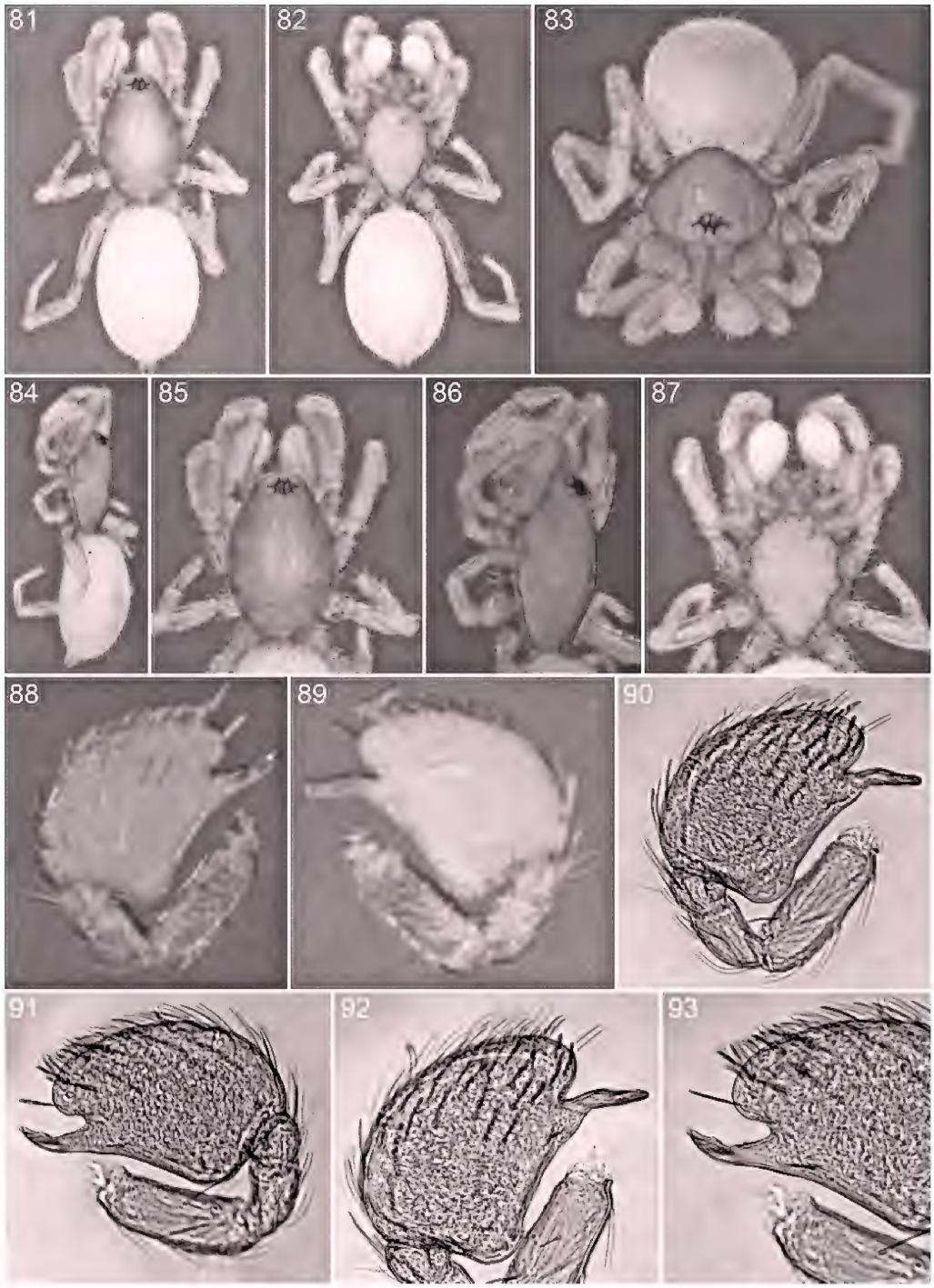
DISTRIBUTION: Belize.

Stenoonops murphyorum, new species
Figures 104–126

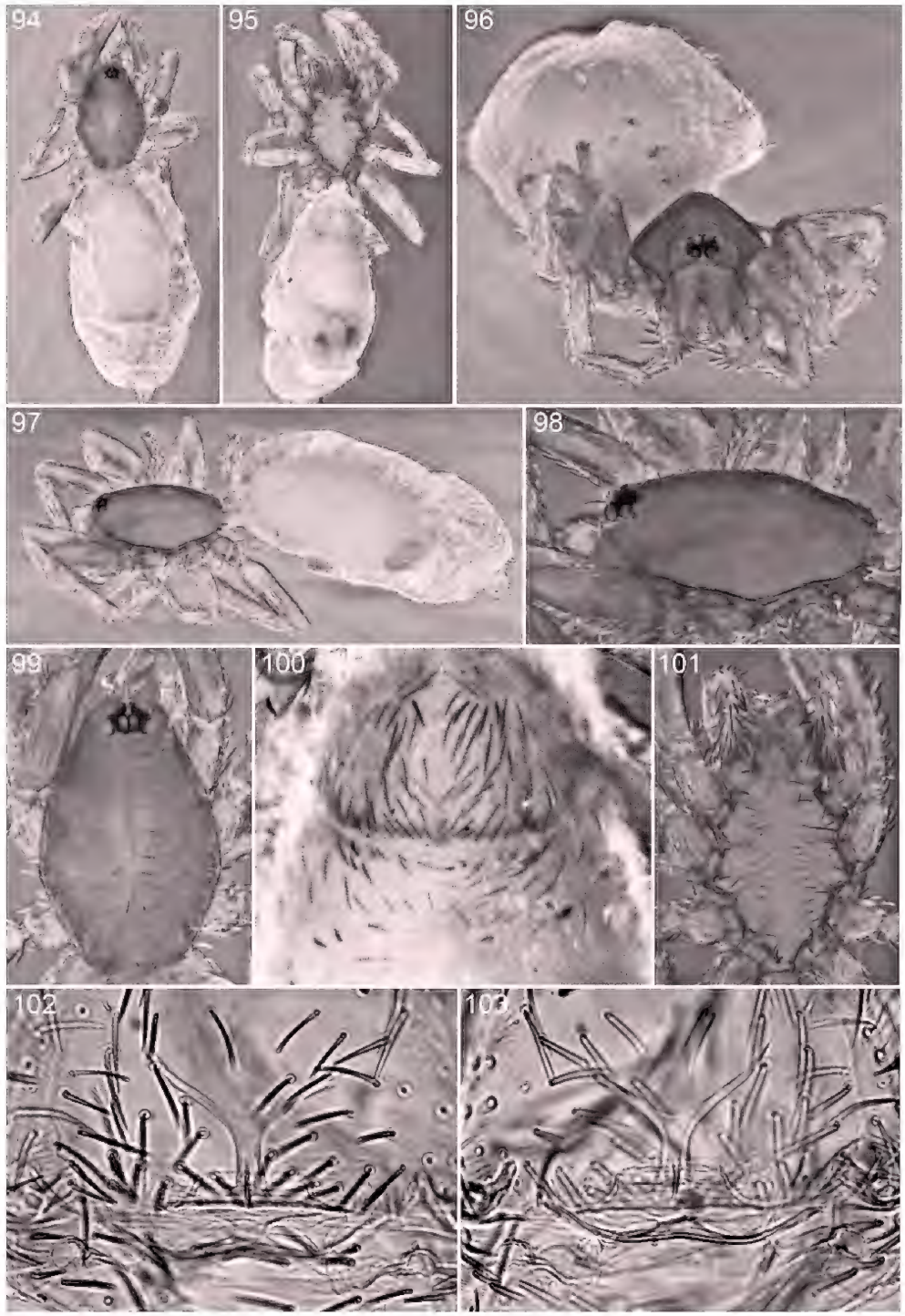
TYPE: Male holotype taken from litter at an elevation of 1500 m at Monteverde, Puntarenas, Costa Rica (Aug. 28, 1983; J.,



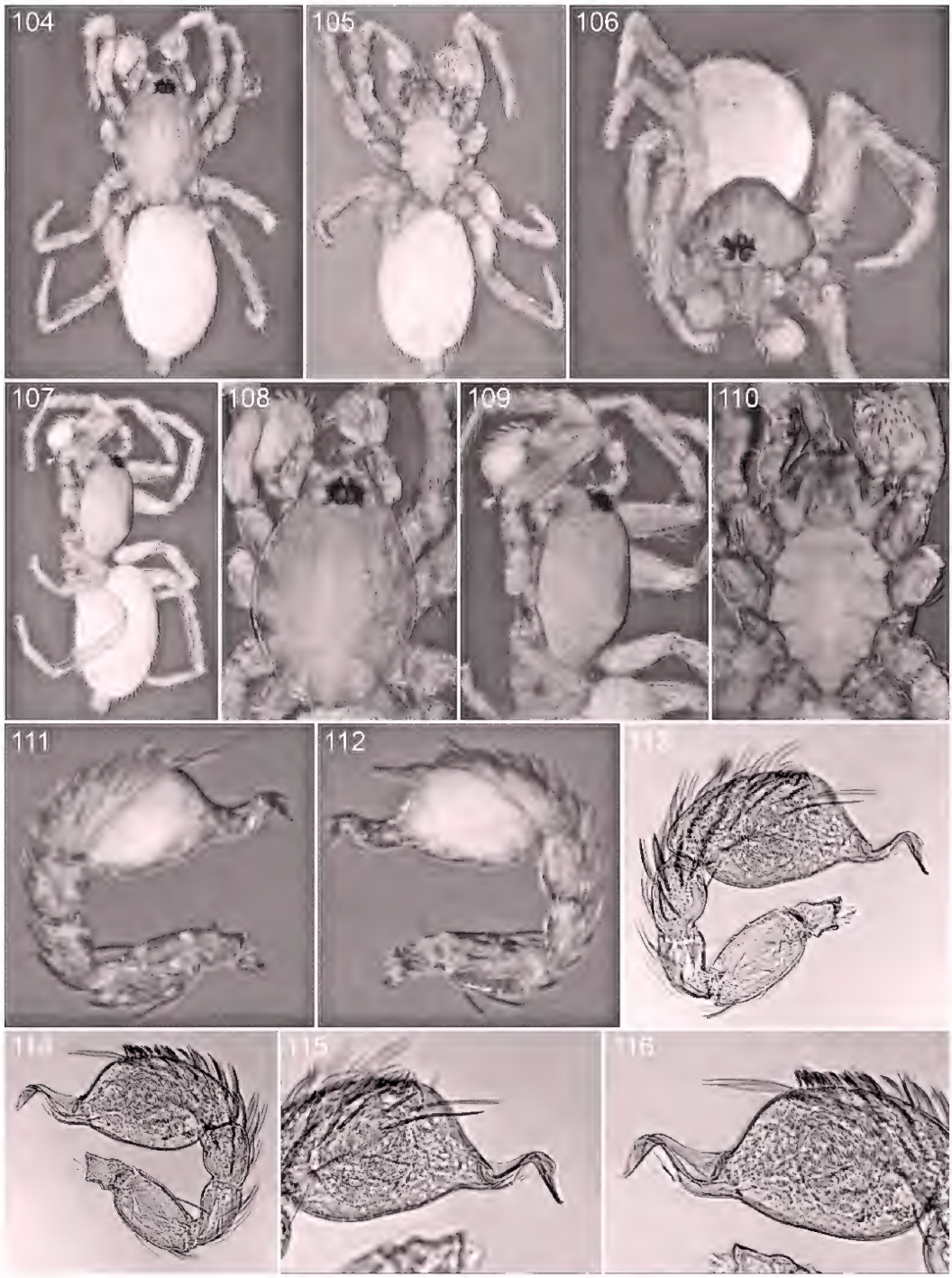
Figs. 71–80. *Stenoonops alazan*, new species, female. **71.** Habitus, dorsal view. **72.** Same, ventral view. **73.** Same, anterior view. **74.** Same, lateral view. **75.** Carapace, lateral view. **76.** Same, dorsal view. **77.** Epigastric area, ventral view. **78.** Sternum, ventral view. **79.** Genitalia, ventral view. **80.** Same, dorsal view.



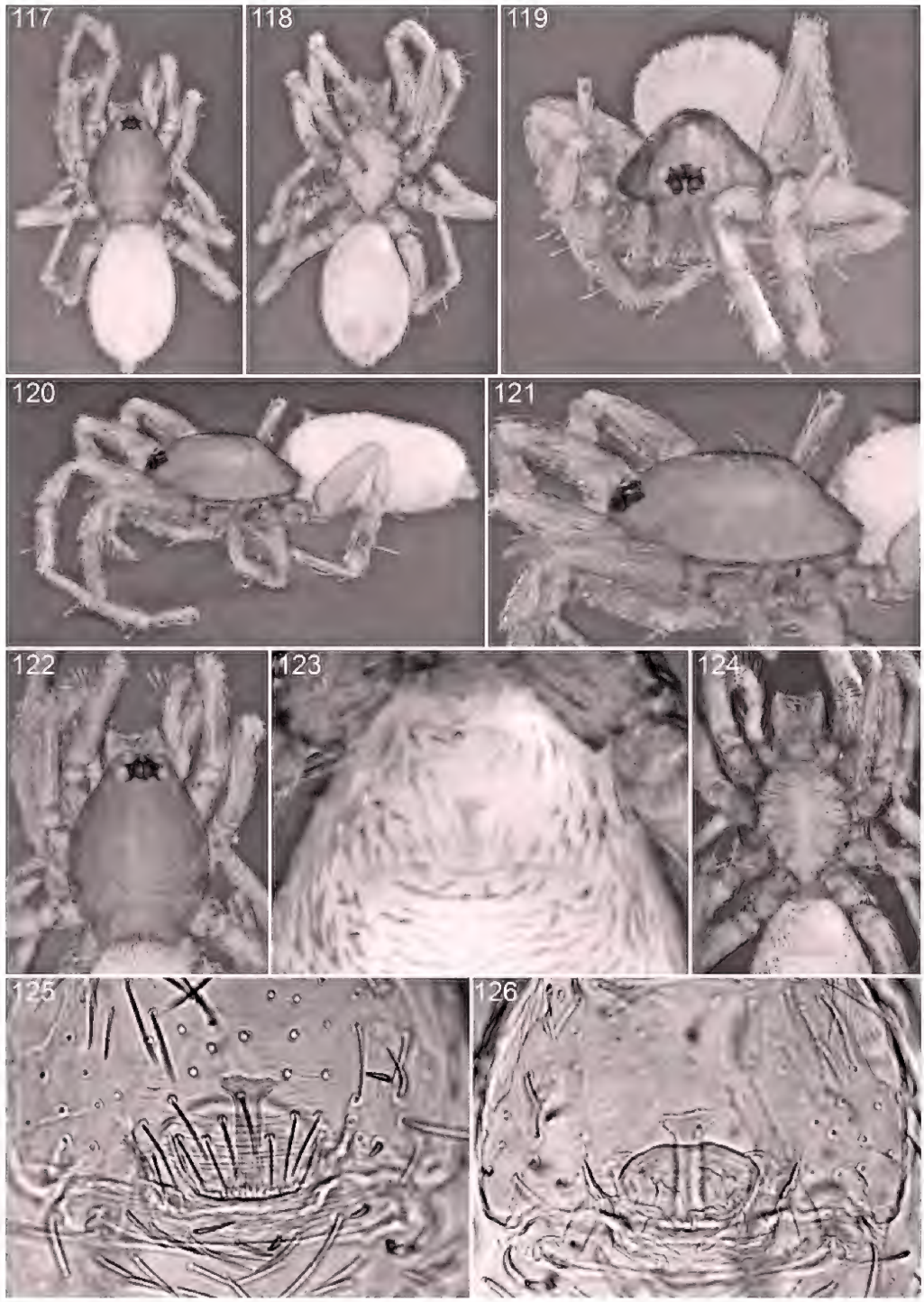
Figs. 81–93. *Stenoonops cabo*, new species, male. **81.** Habitus, dorsal view. **82.** Same, ventral view. **83.** Same, anterior view. **84.** Same, lateral view. **85.** Carapace, dorsal view. **86.** Same, lateral view. **87.** Sternum, ventral view. **88.** Left palp, prolateral view (stereoscope). **89.** Same, retrolateral view. **90.** Same, prolateral view (compound microscope). **91.** Same, retrolateral view. **92.** Embolus, prolateral view. **93.** Same, retrolateral view.



Figs. 94–103. *Stenoonops belmopan*, new species, female. **94.** Habitus, dorsal view. **95.** Same, ventral view. **96.** Same, anterior view. **97.** Same, lateral view. **98.** Carapace, lateral view. **99.** Same, dorsal view. **100.** Epigastric area, ventral view. **101.** Sternum, ventral view. **102.** Genitalia, ventral view. **103.** Same, dorsal view.



Figs. 104–116. *Stenoonops murphyorum*, new species, male. **104.** Habitus, dorsal view. **105.** Same, ventral view. **106.** Same, anterior view. **107.** Same, lateral view. **108.** Carapace, dorsal view. **109.** Same, lateral view. **110.** Sternum, ventral view. **111.** Left palp, prolateral view (stereoscope). **112.** Same, retrolateral view. **113.** Same, prolateral view (compound microscope). **114.** Same, retrolateral view. **115.** Embolus, prolateral view. **116.** Same, retrolateral view.



Figs. 117–126. *Stenoonops murphyorum*, new species, female. **117.** Habitus, dorsal view. **118.** Same, ventral view. **119.** Same, anterior view. **120.** Same, lateral view. **121.** Carapace, lateral view. **122.** Same, dorsal view. **123.** Epigastric area, ventral view. **124.** Sternum, ventral view. **125.** Genitalia, ventral view. **126.** Same, dorsal view.

F. Murphy), deposited in AMNH (PBI_OON 36764).

ETYMOLOGY: The specific name is a patronym in honor of John and Frances Murphy, collectors of this and many other intriguing oonopids.

DIAGNOSIS: Males can be recognized by the long, sinuous embolus (figs. 111–116), females by the wide anterior genitalic projection (figs. 125, 126).

MALE (PBI_OON 36764, figs. 104–116): Total length 1.41. Elevated portion of pars cephalica reticulate; posterior eye row straight from above, procurved from front. Endites with tip directed laterally. Embolus long, sinuous, apical one-third narrowed, seam between cymbium and bulb more obvious basally than distally (figs. 111–116).

FEMALE (PBI_OON 36758, figs. 117–126): Total length 1.41. Anterior genitalic projection wide, extending beyond recurved anterior margin of dorsal portion (figs. 125, 126).

OTHER MATERIAL EXAMINED: COSTA RICA: **Puntarenas:** Monteverde, Aug. 24, 1983, roadside scrub, elev. 1500 m (J., F. Murphy, AMNH PBI_OON 36758), 1♀, Aug. 26, 1983, scrub near hotel, elev. 1500 m (J., F. Murphy, AMNH PBI_OON 36765), 1♀.

DISTRIBUTION: Costa Rica.

Stenoonops petrunkevitchi Chickering
Figures 127–171

Stenoonops petrunkevitchi Chickering, 1951: 241, figs. 29, 30 (male holotype from Barro Colorado Island, Panamá, Panama, in MCZ; examined). – Chickering, 1969: 14, figs. 31–33 (description of female).

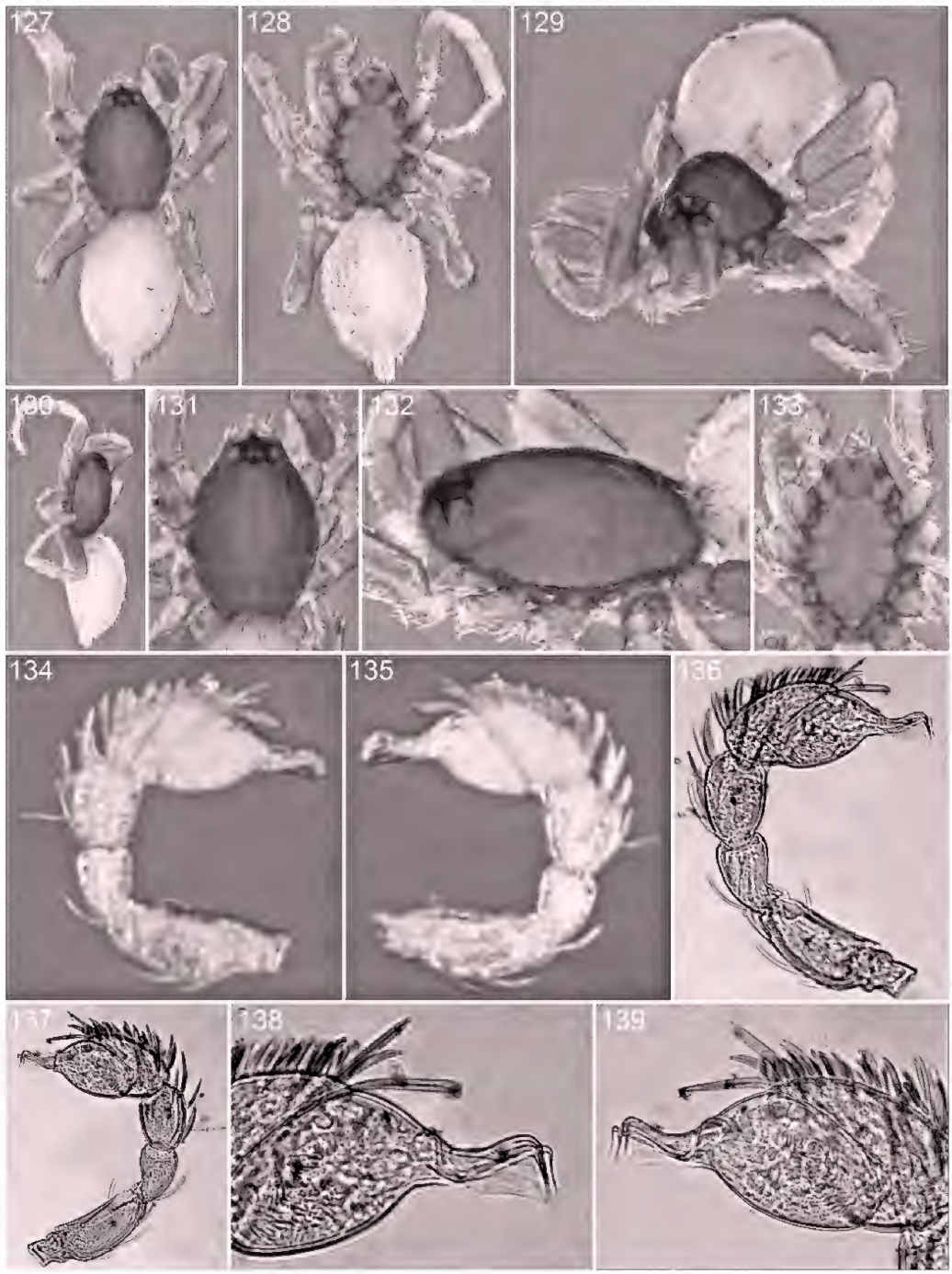
DIAGNOSIS: Males resemble those of *S. murphyorum* in embolus shape, but have the tip of the embolus bifid and accompanied by a conductor (figs. 134–151); females have a bulbous anterior genitalic projection (figs. 160, 161, 170, 171).

MALE (PBI_OON 27176, figs. 127–151): Total length 1.28. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus bifid, accompanied by conductor (figs. 134–151).

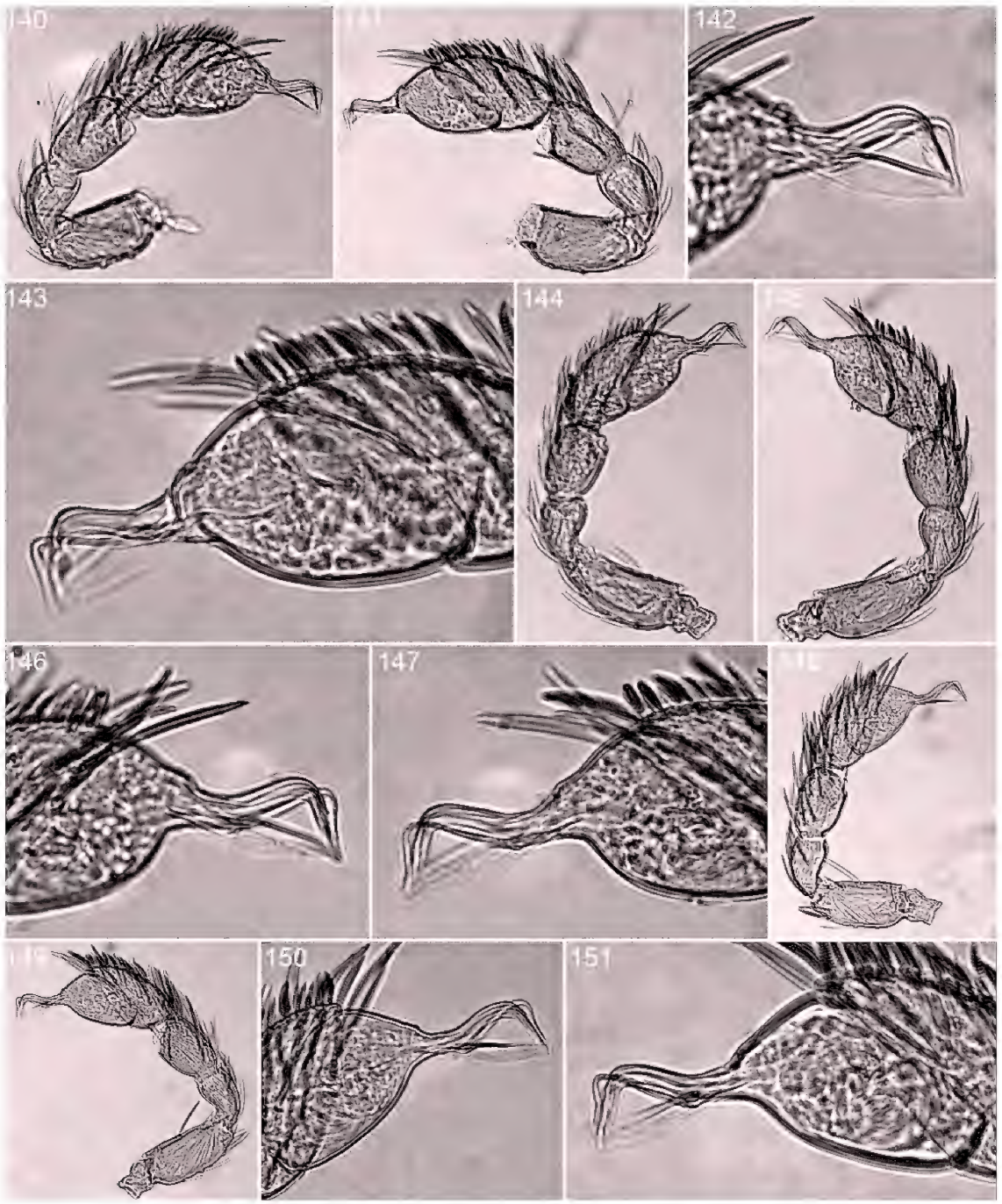
FEMALE (PBI_OON 27177, figs. 152–171): Total length 1.34. Anterior genitalic projection bulbous.

MATERIAL EXAMINED: COSTA RICA: **Limón:** Estación R. B. Hitoy Cerere, Oct. 14, 1998, litter, elev. 450 m (E. Rojas, INBIO 58418, PBI_OON 30994), 1♂; Hone Creek, Finca Alberto Moore, Jan. 8, 2004, under log (C. Víquez, AMNH PBI_OON 29674), 1♀, May 14–17, 2004, leaf litter extraction (C. Víquez, INBIO 2087, PBI_OON 29671), 1♂, June 4–7, 2004, leaf litter extraction (C. Víquez, AMNH PBI_OON 29670), 1♂, same (C. Víquez, INBIO 2089, PBI_OON 29673), 1♂, July 8–11, 2005, leaf litter extraction (C. Víquez, INBIO 1922, PBI_OON 29675), 1♂. **Puntarenas:** Parque Nacional Carara, path to Quebrada Bonita, 9.774293°N, 84.527464°W, May 14, 2008, Berlese (C. Víquez, AMNH PBI_OON 31120), 1♀; 5 km W Rincon de Osa, Península de Osa, 8°42′N, 83°318′W, Mar. 24, 1973, Berlese of buttress mold, elev. 50 m (J. Wagner, J. Kethley, FMNH PBI_OON 10635), 1♂, 1♀. PANAMA: **Chiriquí:** Cerro Colorado, Jan. 23, 1981, stump with ant nest, elev. 1235 m (W. Suter, FMNH 33687, PBI_OON 10189), 2♂; near Nueva California, W Finca Palo Santo, Mar. 9, 1959, Berlese, floor litter in deep ravine, elev. 4900 ft (H. Dybas, FMNH PBI_OON 10575), 1♂. **Darién:** Parque Nacional Darién, Est. Rancho Frio, Pirre, July 30–Aug. 8, 2002 (R. Miranda, H. Santos, MIUP), 1♂, 1♀. **Panamá**: Barro Colorado Island, July 1938 (A. Petrunkevitch, MCZ PBI_OON 340), 1♂ (holotype), June–Oct. 1946, Berlese (J. Zetek, MCZ PBI_OON 341), 1♂ (paratype), Apr. 1953 (A. Nadler, MCZ 68351, PBI_OON 27178), 1♂, Aug. 16, 1954 (A. Chickering, MCZ 68350, PBI_OON 27177), 1♀, Feb. 8, 1958 (A. Chickering, MCZ 68349, PBI_OON 27176), 2♂, Feb. 7, 1976, Berlese, leaf litter (S. Levings, USNM 2046648, PBI_OON 27797), 1♀; Canal Zone Forest Preserve, Jan. 6, 1958 (A. Chickering, MCZ 68348, PBI_OON 27179), 2♂.

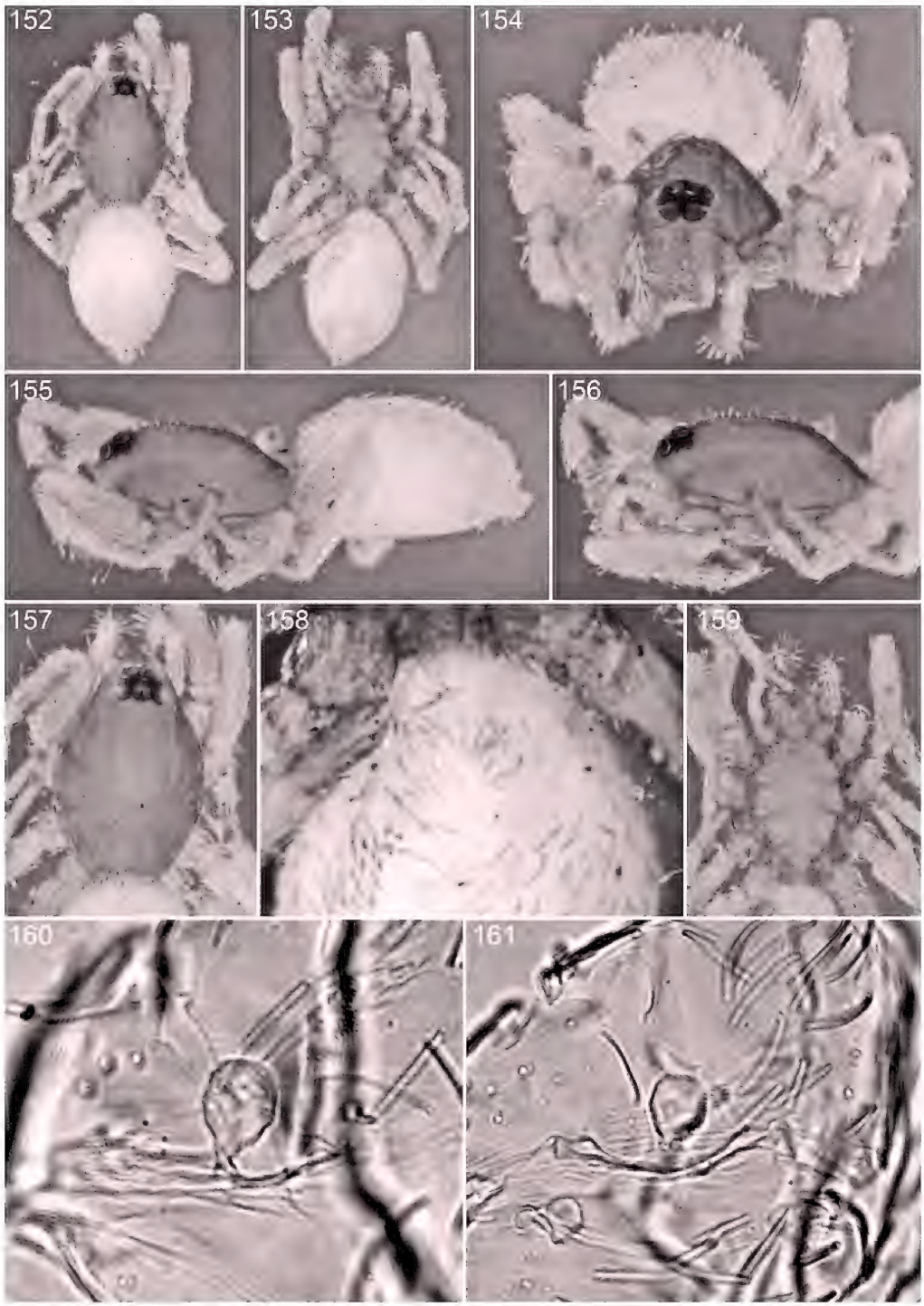
VARIATION: Because the species seems to have an unusually large distribution range, we have documented specimens from two disparate localities in Costa Rica (Hone Creek and Osa Peninsula) and one in northern Panama (Cerro Colorado, figs. 140–151, 162–171), in addition to specimens from the type locality



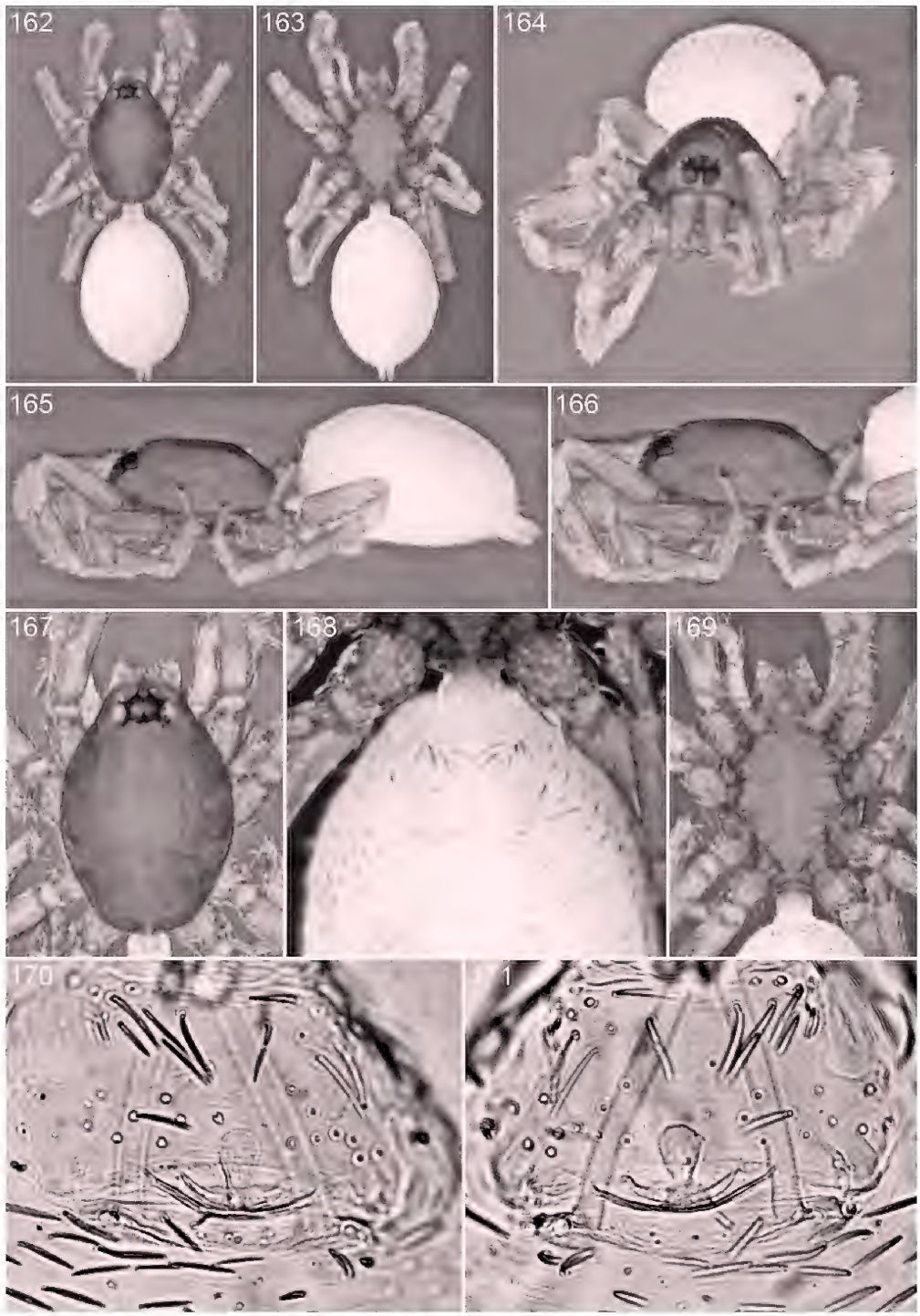
Figs. 127–139. *Stenoonops petrunkevitchi* Chickering, male from Barro Colorado Island, Panama (PBI_OON 27176). **127.** Habitus, dorsal view. **128.** Same, ventral view. **129.** Same, anterior view. **130.** Same, lateral view. **131.** Carapace, dorsal view. **132.** Same, lateral view. **133.** Sternum, ventral view. **134.** Left palp, prolateral view (stereoscope). **135.** Same, retrolateral view. **136.** Same, prolateral view (compound microscope). **137.** Same, retrolateral view. **138.** Embolus, prolateral view. **139.** Same, retrolateral view.



Figs. 140–151. *Stenoonops petrunkevitchi* Chickering, males from Hone Creek, Costa Rica (140–143, PBI_OON 29675), Osa Peninsula, Costa Rica (144–147, PBI_OON 10635), and Cerro Colorado, Panama (148–151, PBI_OON 10189). **140**, **144**, **148.** Left palp, prolateral view. **141**, **145**, **149.** Same, retrolateral view. **142**, **146**, **150.** Left embolus, prolateral view. **143**, **147**, **151.** Same, retrolateral view.



Figs. 152–161. *Stenoonops petrunkevitchi* Chickering, female from Barro Colorado Island, Panama (PBI_OON 27177). **152.** Habitus, dorsal view. **153.** Same, ventral view. **154.** Same, anterior view. **155.** Same, lateral view. **156.** Carapace, lateral view. **157.** Same, dorsal view. **158.** Epigastric area, ventral view. **159.** Sternum, ventral view. **160.** Genitalia, ventral view. **161.** Same, dorsal view.



Figs. 162–171. *Stenoonops petrunkevitchi* Chickering, female from Hone Creek, Costa Rica (PBI_OON 29674). **162.** Habitus, dorsal view. **163.** Same, ventral view. **164.** Same, anterior view. **165.** Same, lateral view. **166.** Carapace, lateral view. **167.** Same, dorsal view. **168.** Epigastric area, ventral view. **169.** Sternum, ventral view. **170.** Genitalia, ventral view. **171.** Same, dorsal view.

(Barro Colorado Island, Panama, figs. 127–139, 152–161). Although there are of course differences among these specimens, they seem to represent individual rather than geographically correlated variation.

DISTRIBUTION: Costa Rica and Panama.

Stenoonops canita, new species
Figures 172–194

TYPE: Male holotype taken from palm buttress with stump W of Cañita at river flood plain, Panamá, Panama (Jan. 3, 1981; W. Suter), deposited in FMNH (PBI_OON 338).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males and females have not been collected together, but are tentatively matched here because of geography. There appear to be some slight differences in the sternal microsculpture, but there is insufficient material to confirm this by scanning electron microscopy and the only available female was apparently collected soon after becoming adult and is probably not fully sclerotized. Males can be recognized by the bipartite embolus, with a narrow ventral and a wider dorsal portion (figs. 179–184), females by the bipartite anterior genitalic projection (figs. 193, 194).

MALE (PBI_OON 338, figs. 172–184): Total length 1.22. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus with ventral portion narrow, dorsal portion wide (figs. 179–184).

FEMALE (PBI_OON 21102, figs. 185–194): Total length 1.23. Anterior genitalic projection clearly divided into longer proximal and short, rounded distal portions (figs. 193, 194).

OTHER MATERIAL EXAMINED: PANAMA: **Panamá:** upper Río Majé, Bayano region, June 18, 1976 (L. Kirkendall, AMNH PBI_OON 21102), 1♀.

DISTRIBUTION: Panama.

Stenoonops tayrona, new species
Figures 195–221

TYPES: Male holotype and female allotype taken in Tayrona-Park, ca. 35 km E of Santa Marta, Magdalena, Colombia (Apr. 1986; H. Müller), deposited in MHNG (PBI_OON 339).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males can be recognized by the long ventral embolar process, which extends obliquely away from the complex dorsal embolar elements (figs. 202–211), females by the short, rounded anterior genitalic projection (figs. 220, 221).

MALE (PBI_OON 339, figs. 195–211): Total length 1.02. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus with long ventral portion extending obliquely from more dorsal elements (figs. 202–211).

FEMALE (PBI_OON 339, figs. 212–221): Total length 1.17. Anterior genitalic projection very short, distally rounded (figs. 220, 221).

OTHER MATERIAL EXAMINED: COLOMBIA: **Magdalena:** Tayrona-Park, ca. 35 km E Santa Marta, April 1986 (H. Müller, MHNG PBI_OON 339), 1♀. VENEZUELA: **Aragua:** Rancho Grande, 15 km N Maracay, Feb. 19–27, 1971, Berlese, forest litter, elev. 1000–1400 m (S., J. Peck, FMNH PBI_OON 38343) 1♂.

VARIATION: The single male known from Venezuela (figs. 208–211) appears to be conspecific with the types, despite the substantial geographic separation.

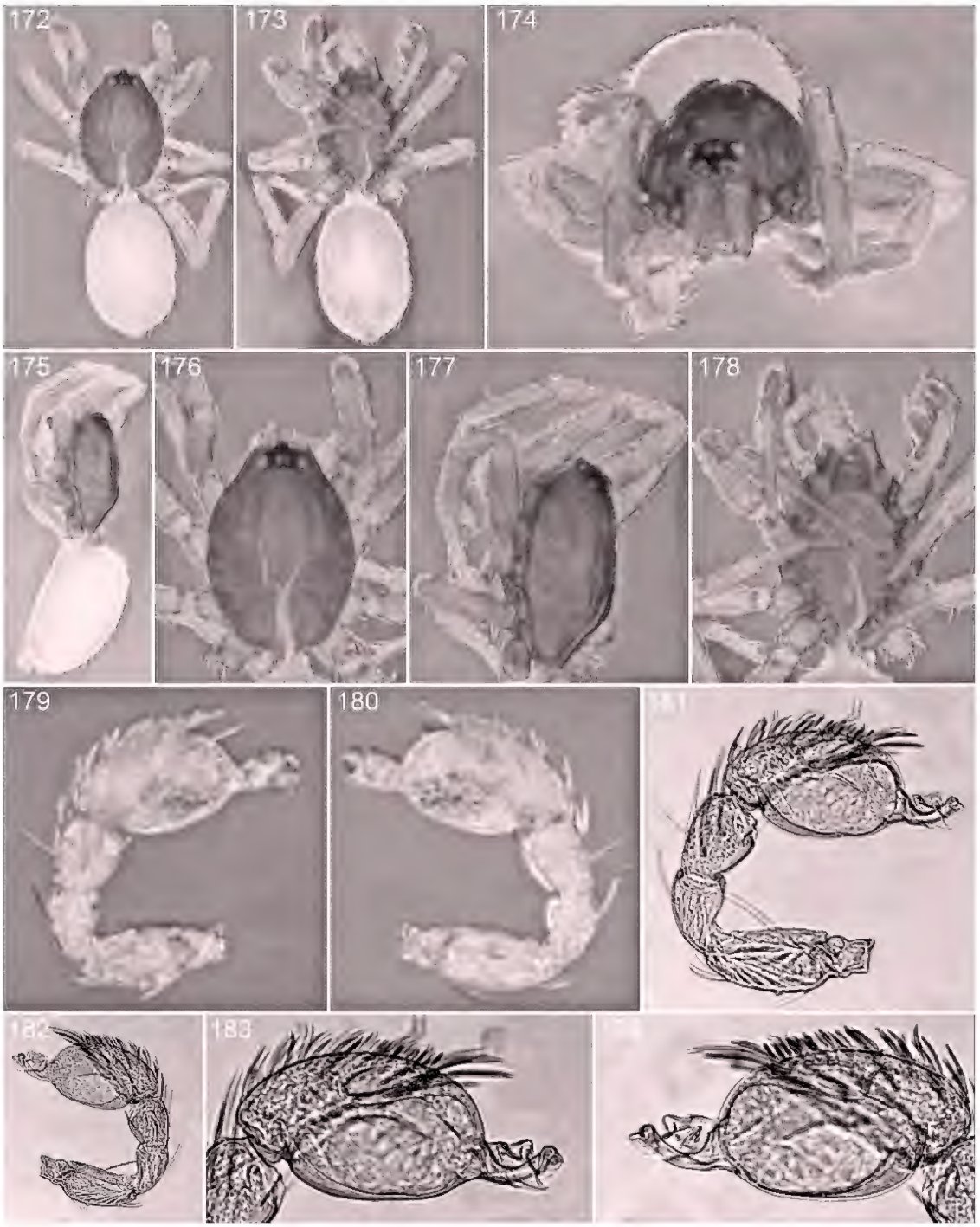
DISTRIBUTION: Colombia and Venezuela.

Stenoonops kochalkai, new species
Figures 222–235

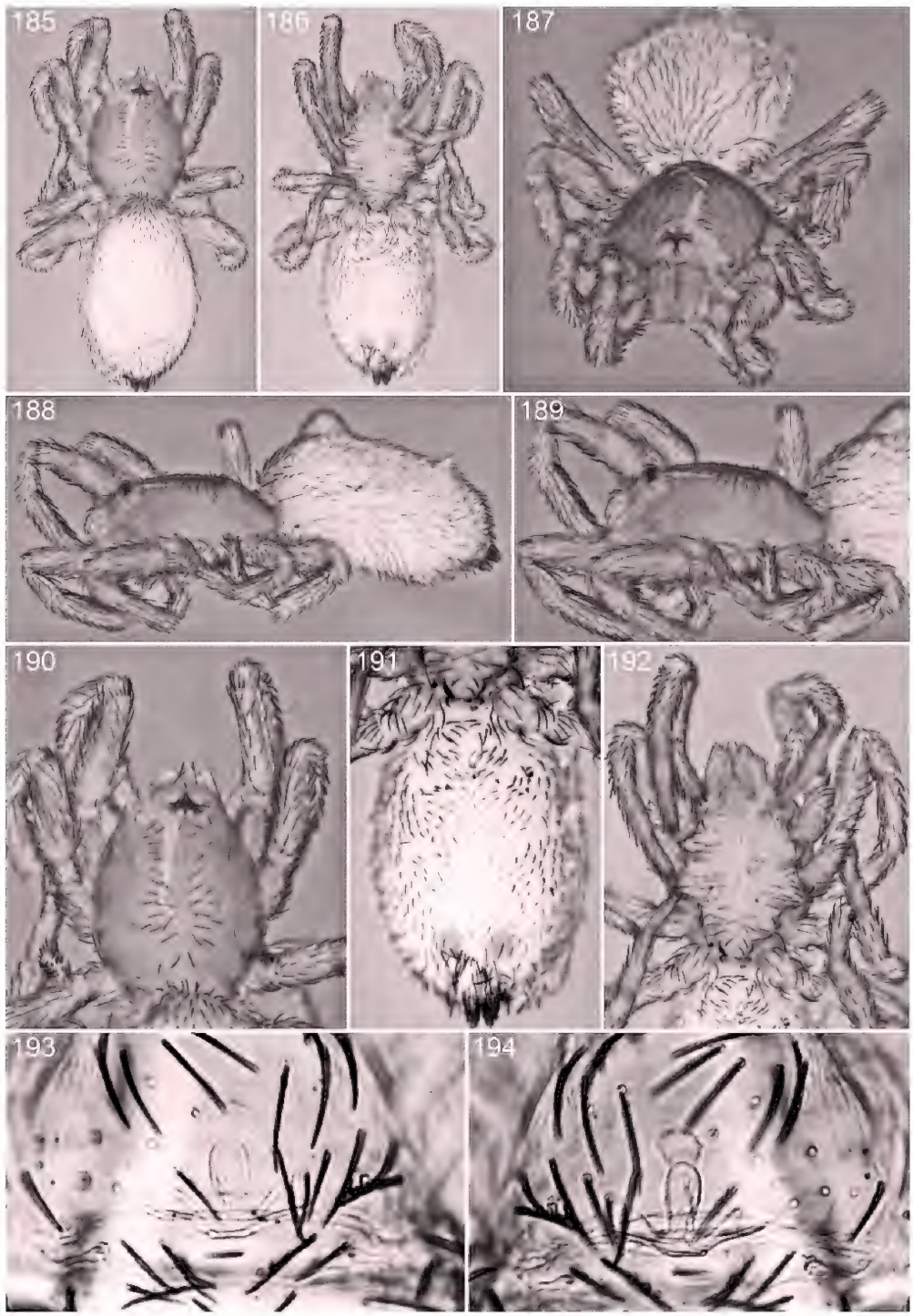
TYPE: Male holotype taken in sifted leaf litter from an elevation of 1563 m at a site between San Pedro and San Javier, Sierra Nevada de Santa Marta, La Guajira, Colombia (Mar. 29, 1975; J. Kochalka), deposited in AMNH (PBI_OON 37063).

ETYMOLOGY: The specific name is a patronym in honor of John Kochalka, collector of this and many other uncommon oonopids.

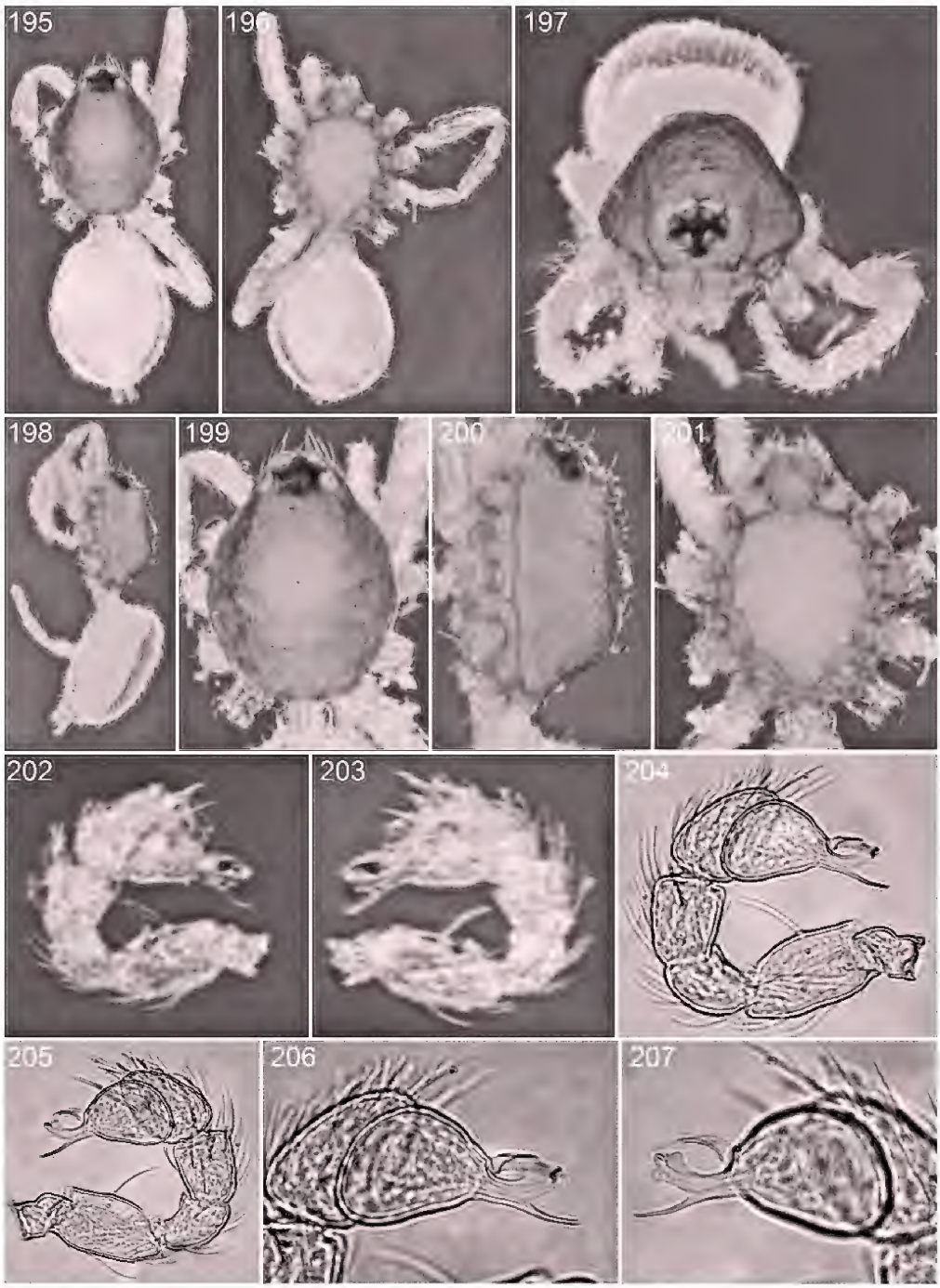
DIAGNOSIS: Males can be recognized by the triangular dorsal portion, and sinuous ventral portion, of the embolus (figs. 229–235).



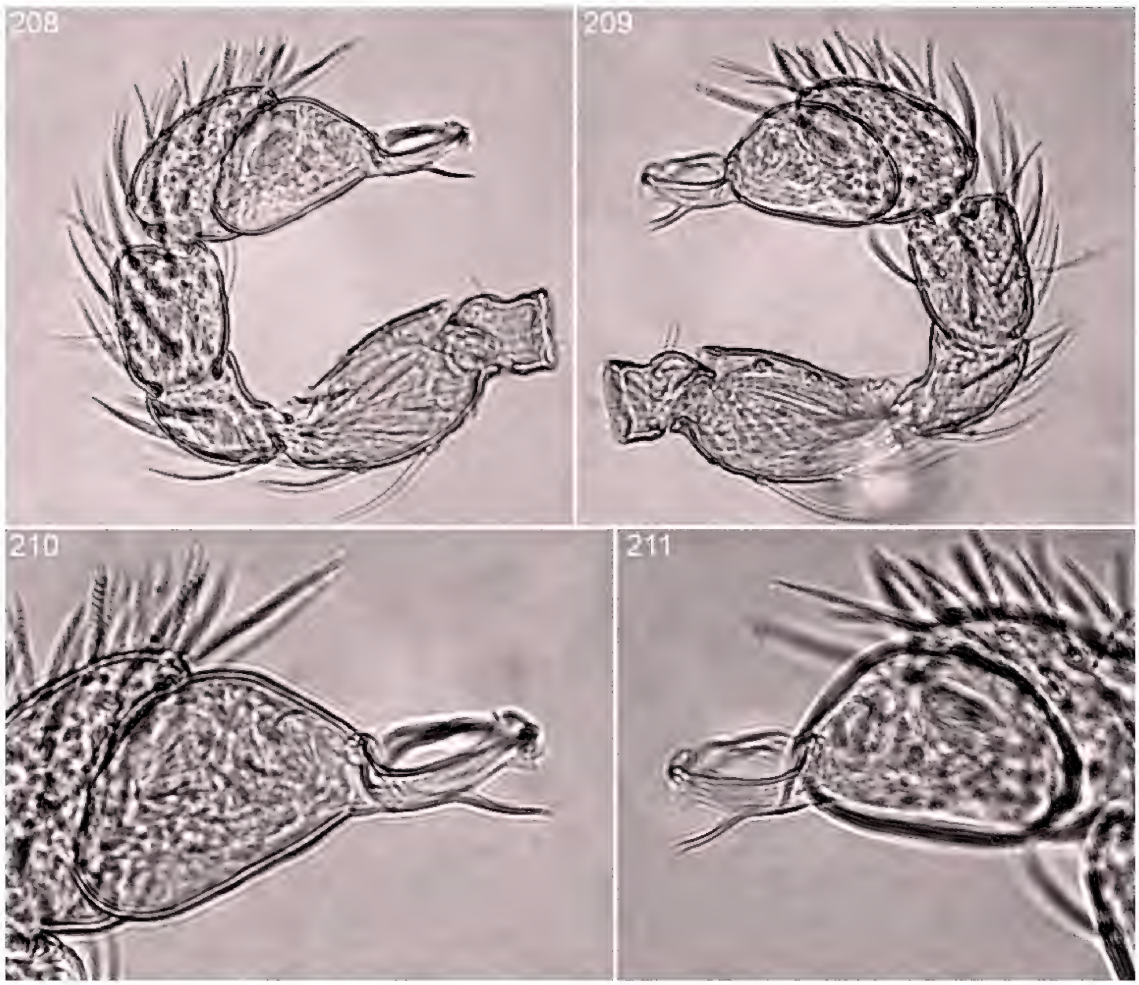
Figs. 172–184. *Stenoonops canita*, new species, male. **172.** Habitus, dorsal view. **173.** Same, ventral view. **174.** Same, anterior view. **175.** Same, lateral view. **176.** Carapace, dorsal view. **177.** Same, lateral view. **178.** Sternum, ventral view. **179.** Left palp, prolateral view (stereoscope). **180.** Same, retrolateral view. **181.** Same, prolateral view (compound microscope). **182.** Same, retrolateral view. **183.** Embolus, prolateral view. **184.** Same, retrolateral view.



Figs. 185–194. *Stenoonops canita*, new species, female. **185.** Habitus, dorsal view. **186.** Same, ventral view. **187.** Same, anterior view. **188.** Same, lateral view. **189.** Carapace, lateral view. **190.** Same, dorsal view. **191.** Abdomen, ventral view. **192.** Sternum, ventral view. **193.** Genitalia, ventral view. **194.** Same, dorsal view.



Figs. 195–207. *Stenoonops tayrona*, new species, male from Colombia (PBI_OON 339). **195.** Habitus, dorsal view. **196.** Same, ventral view. **197.** Same, anterior view. **198.** Same, lateral view. **199.** Carapace, dorsal view. **200.** Same, lateral view. **201.** Sternum, ventral view. **202.** Left palp, prolateral view (stereoscope). **203.** Same, retrolateral view. **204.** Same, prolateral view (compound microscope). **205.** Same, retrolateral view. **206.** Embolus, prolateral view. **207.** Same, retrolateral view.



Figs. 208–211. *Stenoonops tayrona*, new species, male from Venezuela (PBI_OON 38343). **208.** Left palp, prolateral view. **209.** Same, retrolateral view. **210.** Embolus, prolateral view. **211.** Same, retrolateral view.

MALE (PBI_OON 37063, figs. 222–235): Total length 1.60. Elevated portion of pars cephalica smooth; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus with dorsal portion short, triangular, ventral portion longer, twisted (figs. 229–235).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Colombia.

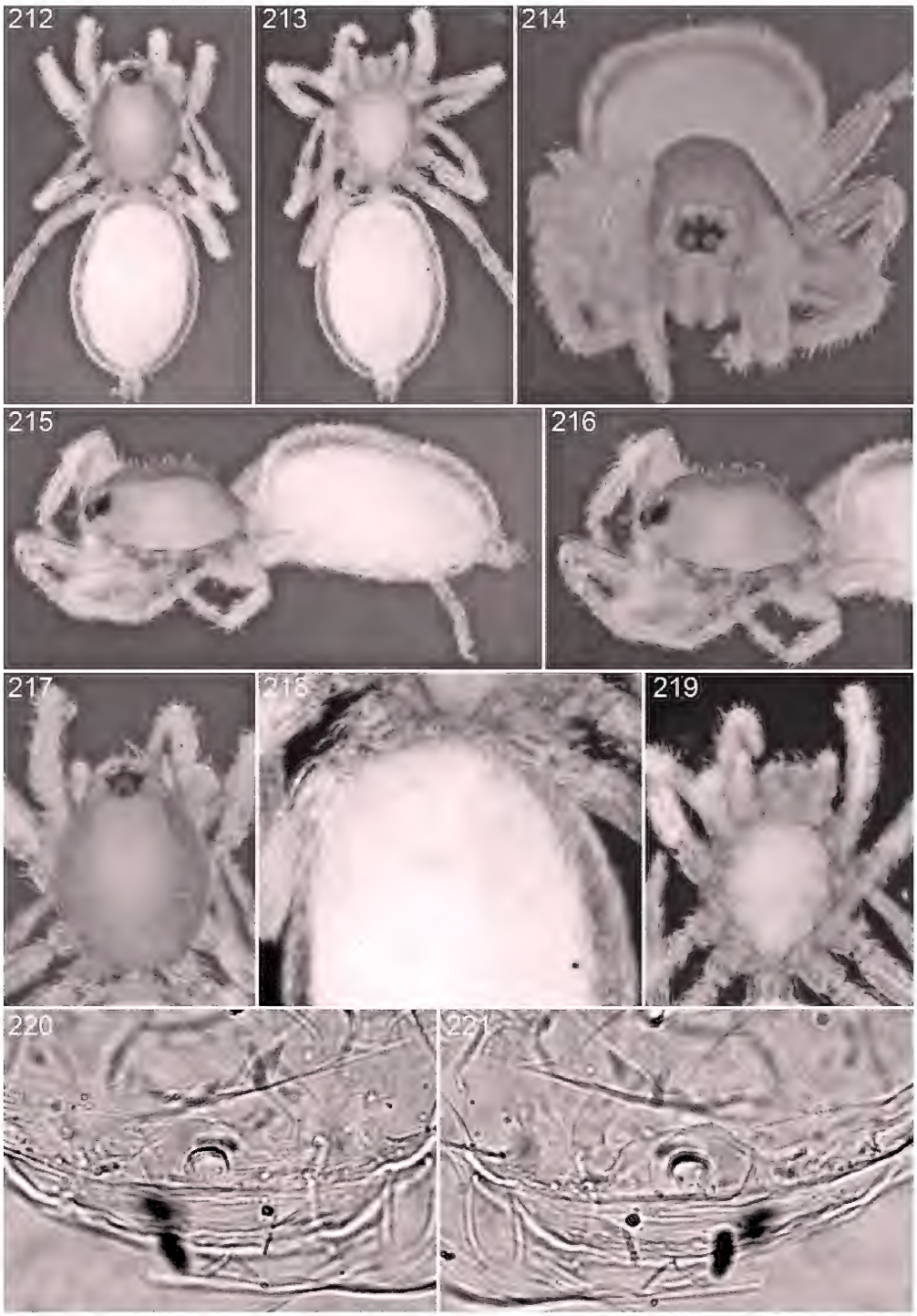
Stenoonops bimini, new species
Figures 236–258

TYPE: Male holotype taken on South Bimini, Bahama Islands (May 1951; W. Gertsch, M. Cazier), deposited in AMNH (PBI_OON 27354).

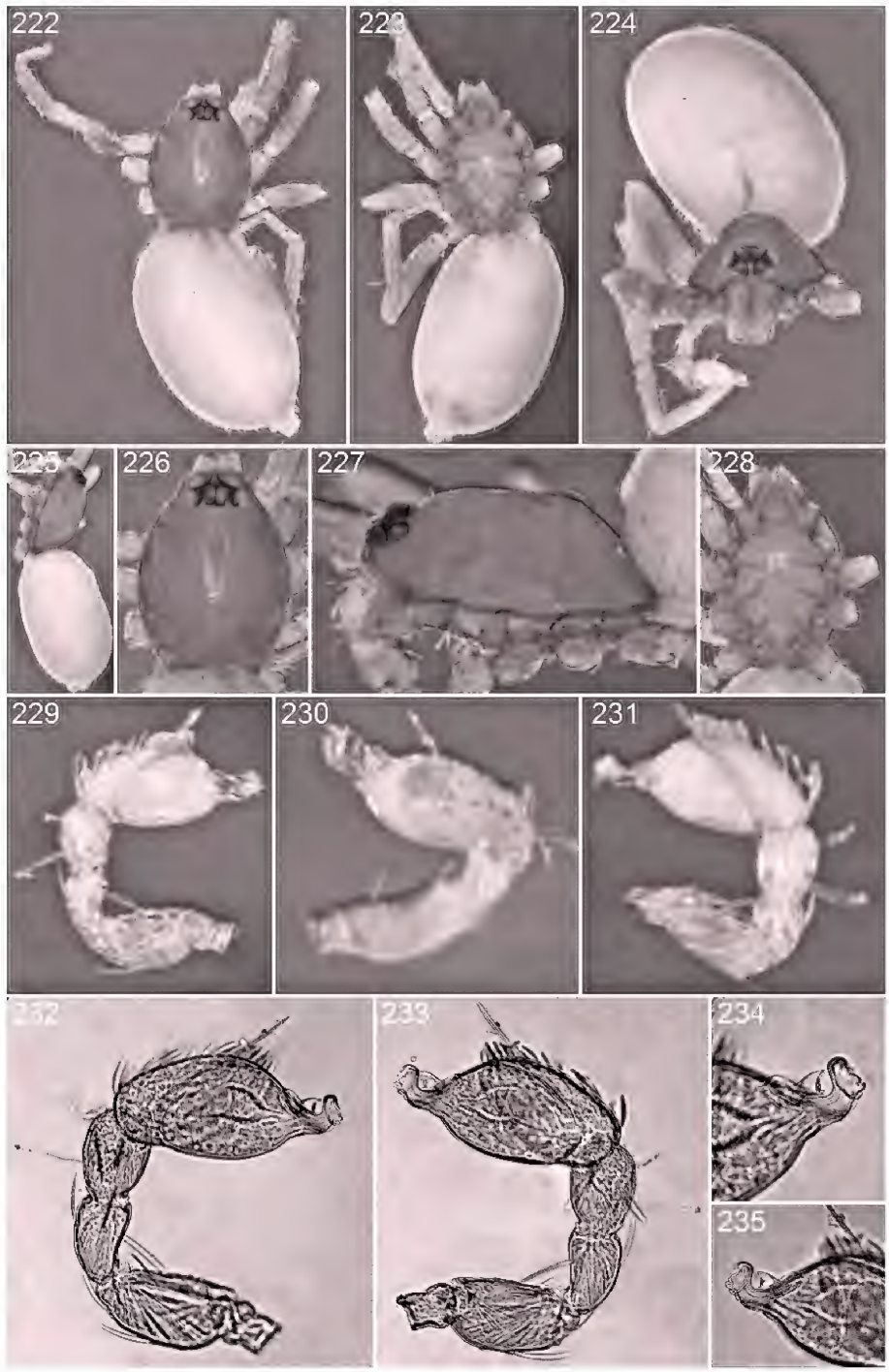
ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males can be recognized by the two short, twisted branches of the embolus (figs. 243–248), females by the W-shaped anterior genitalic margin (figs. 257, 258).

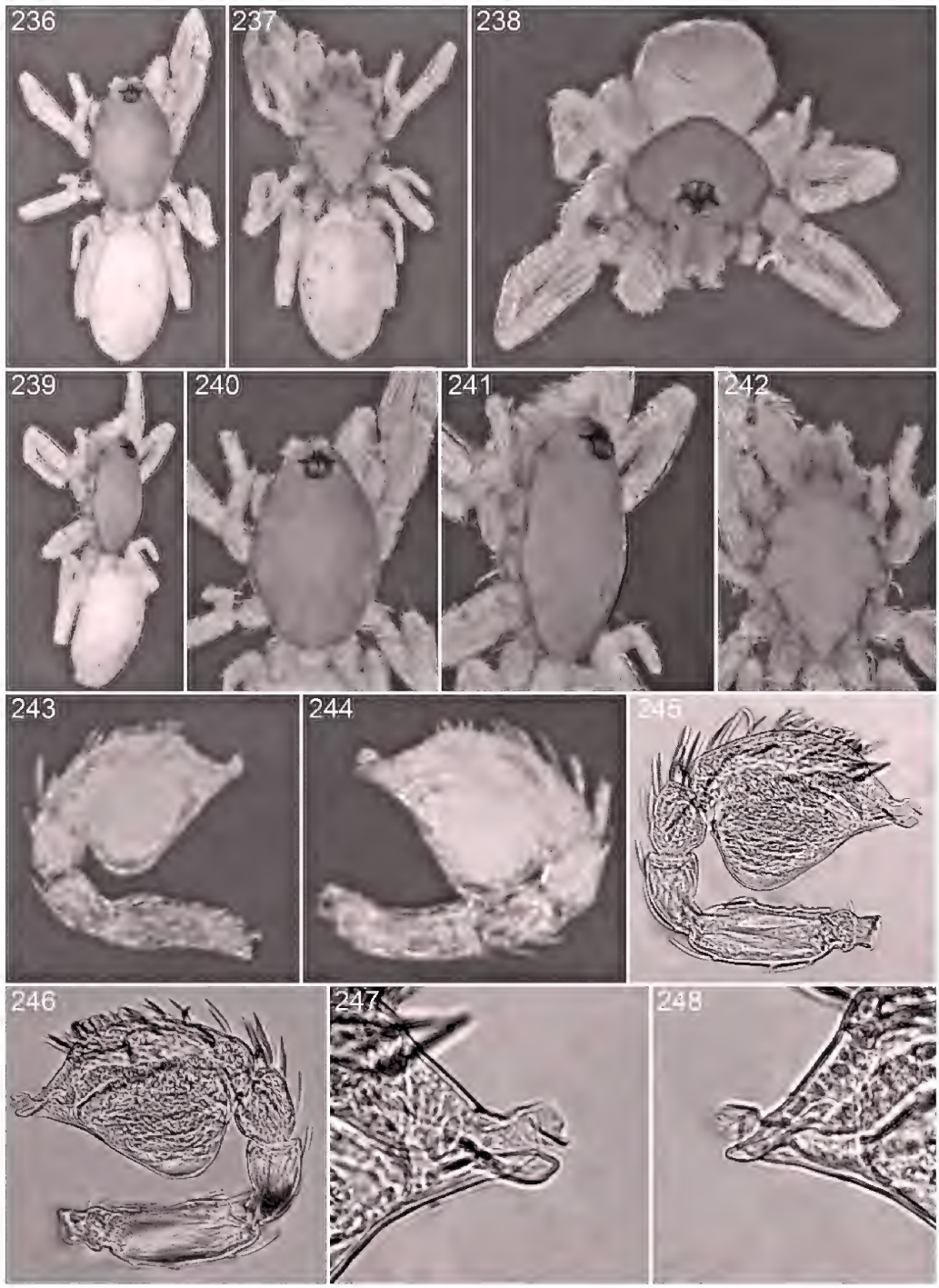
MALE (PBI_OON 27354, figs. 236–248): Total length 1.20. Elevated portion of pars cephalica smooth; posterior eye row straight from above, procurved from front. Endites with long, oblique longitudinal ridge. Embolus with both dorsal and ventral portions short, twisted (figs. 243–248).



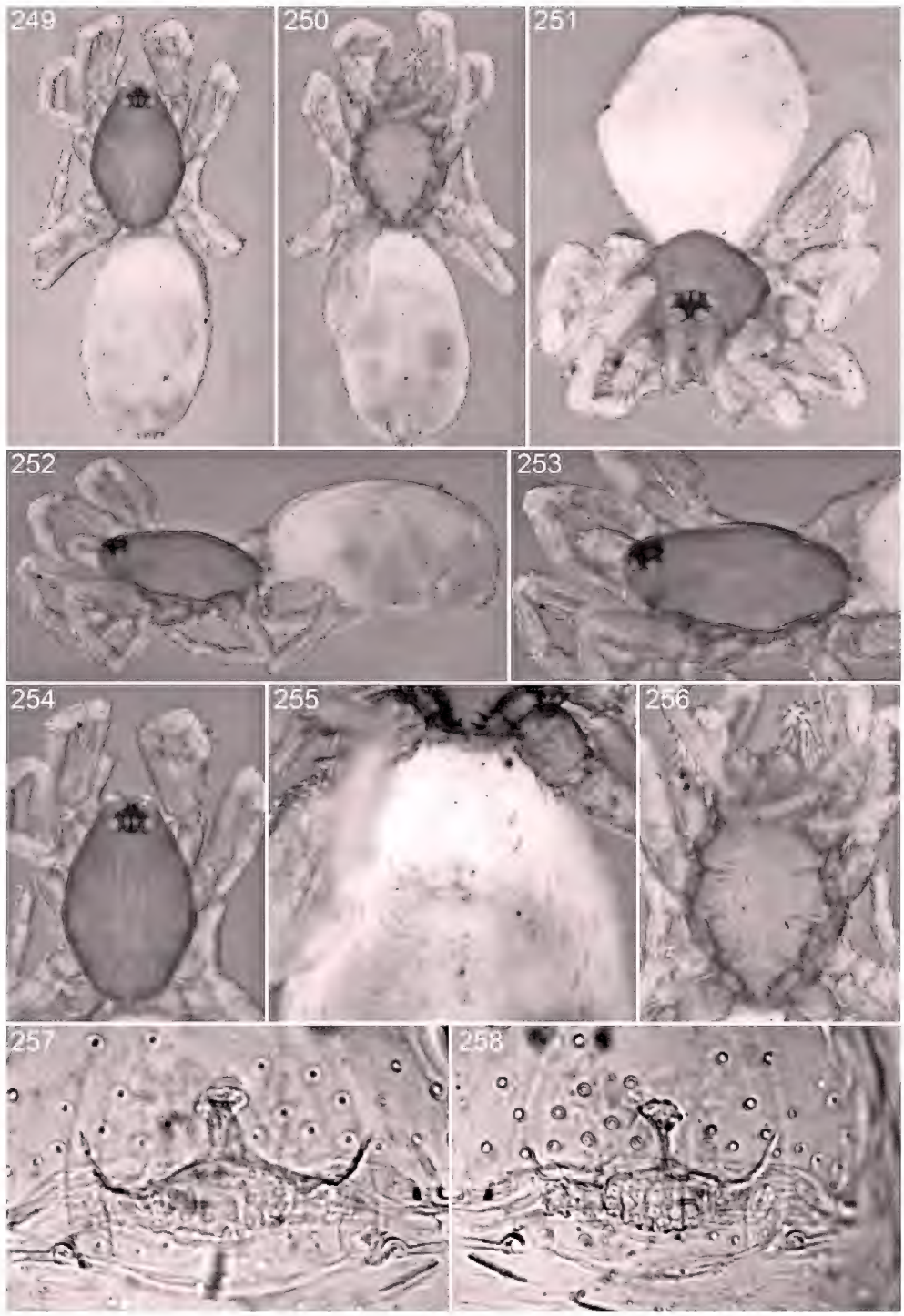
Figs. 212–221. *Stenoonops tayrona*, new species, female. **212.** Habitus, dorsal view. **213.** Same, ventral view. **214.** Same, anterior view. **215.** Same, lateral view. **216.** Carapace, lateral view. **217.** Same, dorsal view. **218.** Epigastric area, ventral view. **219.** Sternum, ventral view. **220.** Genitalia, ventral view. **221.** Same, dorsal view.



Figs. 222–235. *Stenoonops kochalkai*, new species, male. **222.** Habitus, dorsal view. **223.** Same, ventral view. **224.** Same, anterior view. **225.** Same, lateral view. **226.** Carapace, dorsal view. **227.** Same, lateral view. **228.** Sternum, ventral view. **229.** Left palp, prolateral view (stereoscope). **230.** Same, dorsal view. **231.** Same, retrolateral view. **232.** Same, prolateral view (compound microscope). **233.** Same, retrolateral view. **234.** Embolus, prolateral view. **235.** Same, retrolateral view.



Figs. 236–248. *Stenoonops bimini*, new species, male. **236.** Habitus, dorsal view. **237.** Same, ventral view. **238.** Same, anterior view. **239.** Same, lateral view. **240.** Carapace, dorsal view. **241.** Same, lateral view. **242.** Sternum, ventral view. **243.** Left palp, prolateral view (stereoscope). **244.** Same, retrolateral view. **245.** Same, prolateral view (compound microscope). **246.** Same, retrolateral view. **247.** Embolus, prolateral view. **248.** Same, retrolateral view.



Figs. 249–258. *Stenoonops bimini*, new species, female. **249.** Habitus, dorsal view. **250.** Same, ventral view. **251.** Same, anterior view. **252.** Same, lateral view. **253.** Carapace, lateral view. **254.** Same, dorsal view. **255.** Epigastric area, ventral view. **256.** Sternum, ventral view. **257.** Genitalia, ventral view. **258.** Same, dorsal view.

FEMALE (PBI_OON 26488, figs. 249–258): Total length 1.39. Anterior genitalic projection reaching farther anterior then edges of W-shaped anterior margin (figs. 257, 258).

OTHER MATERIAL EXAMINED: WEST INDIES: **Bahama Islands:** South Bimini, June 1951 (M. Cazier, C., P. Vaurie, AMNH PBI_OON 26488), 1♀.

DISTRIBUTION: Bahama Islands.

The Cuban Species

In their paper on Cuban oonopids, Dumitresco and Georgesco (1983) included descriptions of two species they assigned to *Stenoonops*. The species they identified as *S. scabriculus* does appear to be a true *Stenoonops*, based on their description and drawing of the male palp. That drawing was apparently made from a slide-mounted palp that was probably squashed by a cover slip. The expanded embolar tip shown in their figure does not match that of true *S. scabriculus*, and that species is known only from the Lesser Antilles and Venezuela. The identity of their two Cuban males will remain indeterminate until topotypical material can be collected.

The second species studied by those authors was identified by them as *S. hoffi*, otherwise known only from Jamaica; their Cuban specimens are certainly close to *S. hoffi*, and thus belong to *Scaphioides* rather than *Stenoonops*.

Stenoonops dimotus Chickering
Figures 259–268

Stenoonops dimotus Chickering, 1969: 8, figs. 19, 20 (female holotype from Ferry, near Red Hills Road, St. Andrew Par., Jamaica, in MCZ; examined).

DIAGNOSIS: Females resemble those of *S. mandeville* in having a distinctly recurved posterior eye row (fig. 264) and darkened anterior femora (fig. 259), but differ in the shape of the median portion of the genitalia (figs. 267, 268).

MALE: Unknown.

FEMALE (PBI_OON 357, figs. 259–268): Total length 2.12. Elevated portion of pars cephalica finely reticulate; posterior eye row recurved from above, straight from front. Posterior genitalic margin rectangular, not extended posteriorly at middle; anterior portion with serrate posterior edge and winglike anterolateral extensions (figs. 267, 268).

MATERIAL EXAMINED: JAMAICA: **St. Andrew:** Ferry, near Red Hills Road, Oct. 28, 1957 (A. Chickering, MCZ PBI_OON 357), 1♀ (holotype).

DISTRIBUTION: Jamaica.

Stenoonops mandeville, new species
Figures 269–278

TYPE: Female holotype from Mandeville, Manchester, Jamaica (Apr. 14, 1959; Sanderson), deposited in AMNH (PBI_OON 1849).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females resemble those of *S. dimotus* in having a distinctly recurved posterior eye row (fig. 274) and darkened anterior femora (fig. 269), but differ in the shape of the median portion of the genitalia (figs. 277, 278).

MALE: Unknown.

FEMALE (PBI_OON 1849, figs. 269–278): Total length 2.00. Elevated portion of pars cephalica finely reticulate; posterior eye row recurved from above, straight from front. Posterior genitalic margin rectangular, anterior elements protruding posteriorly at middle, with narrow anterior projection (figs. 277, 278).

OTHER MATERIAL EXAMINED: None.

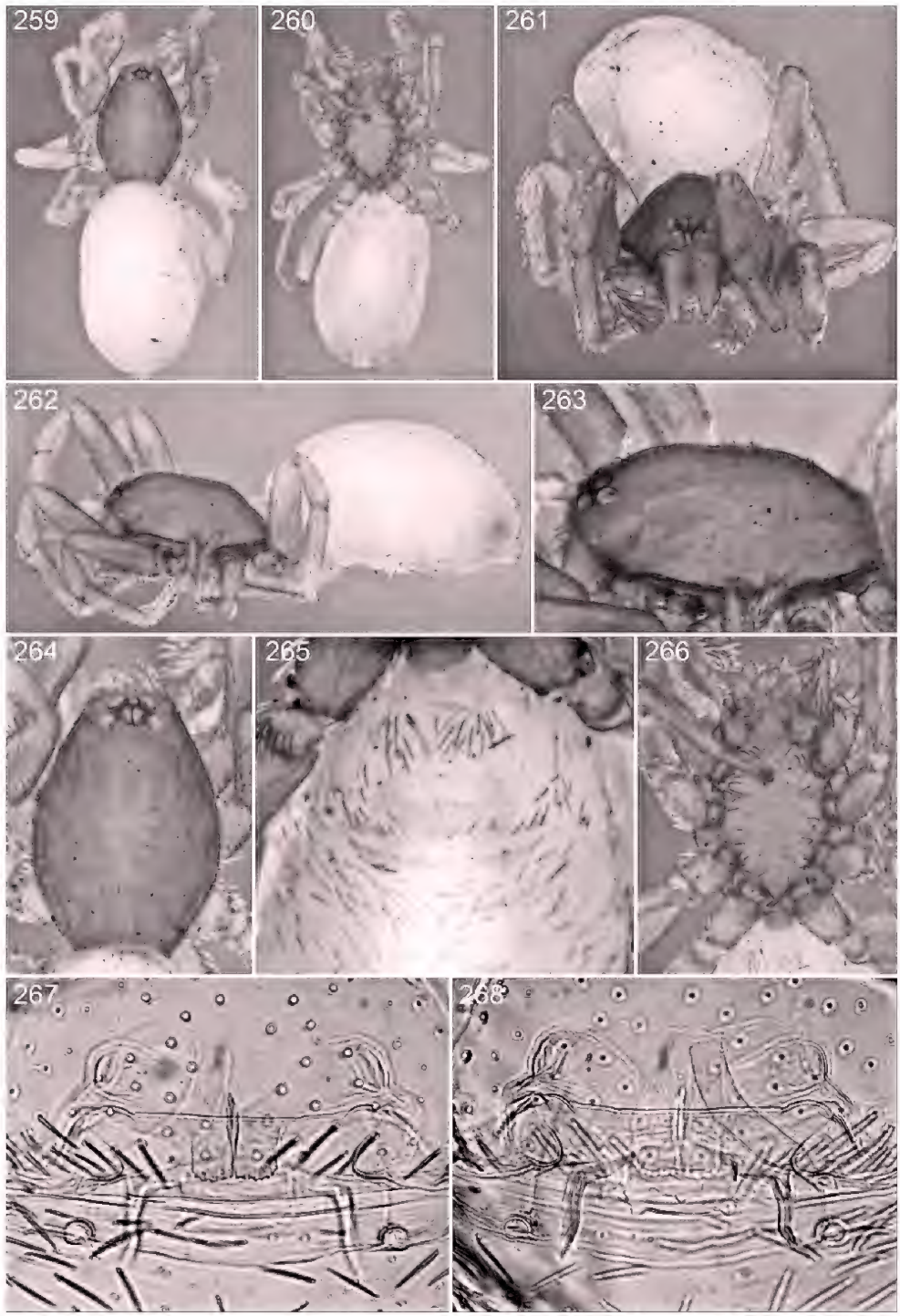
DISTRIBUTION: Jamaica.

Stenoonops insolitus Chickering
Figures 279–302

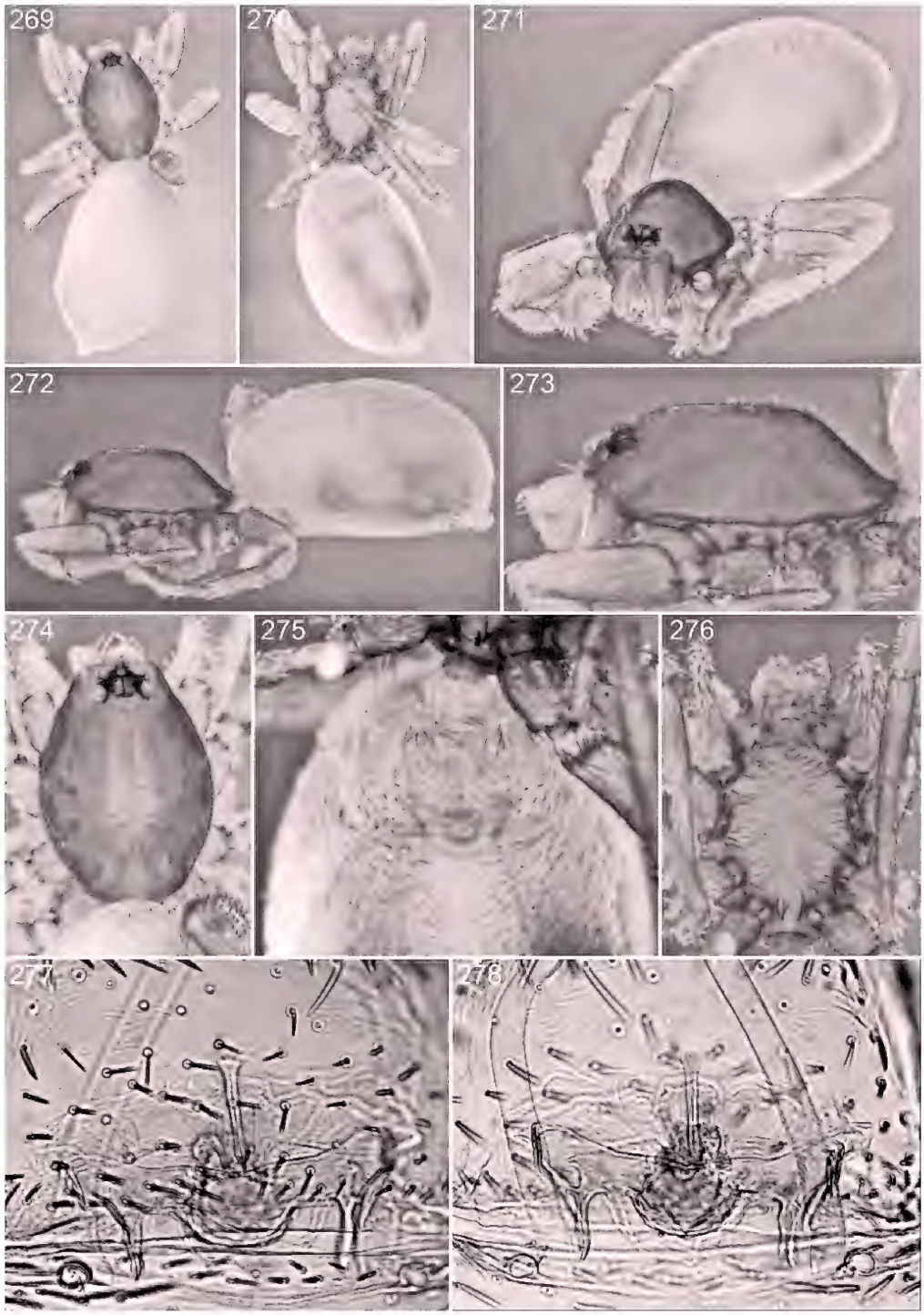
Stenoonops insolitus Chickering, 1969: 9, figs. 21–26 (male holotype from 3 miles east of Old Harbour, St. Catherine Par., Jamaica, in MCZ; examined).

DIAGNOSIS: Males can easily be recognized by the two long, backward pointing macrosetae on each endite (fig. 286), females by the W-shaped base and splayed-out tip of the anterior genitalic projection (figs. 301, 302).

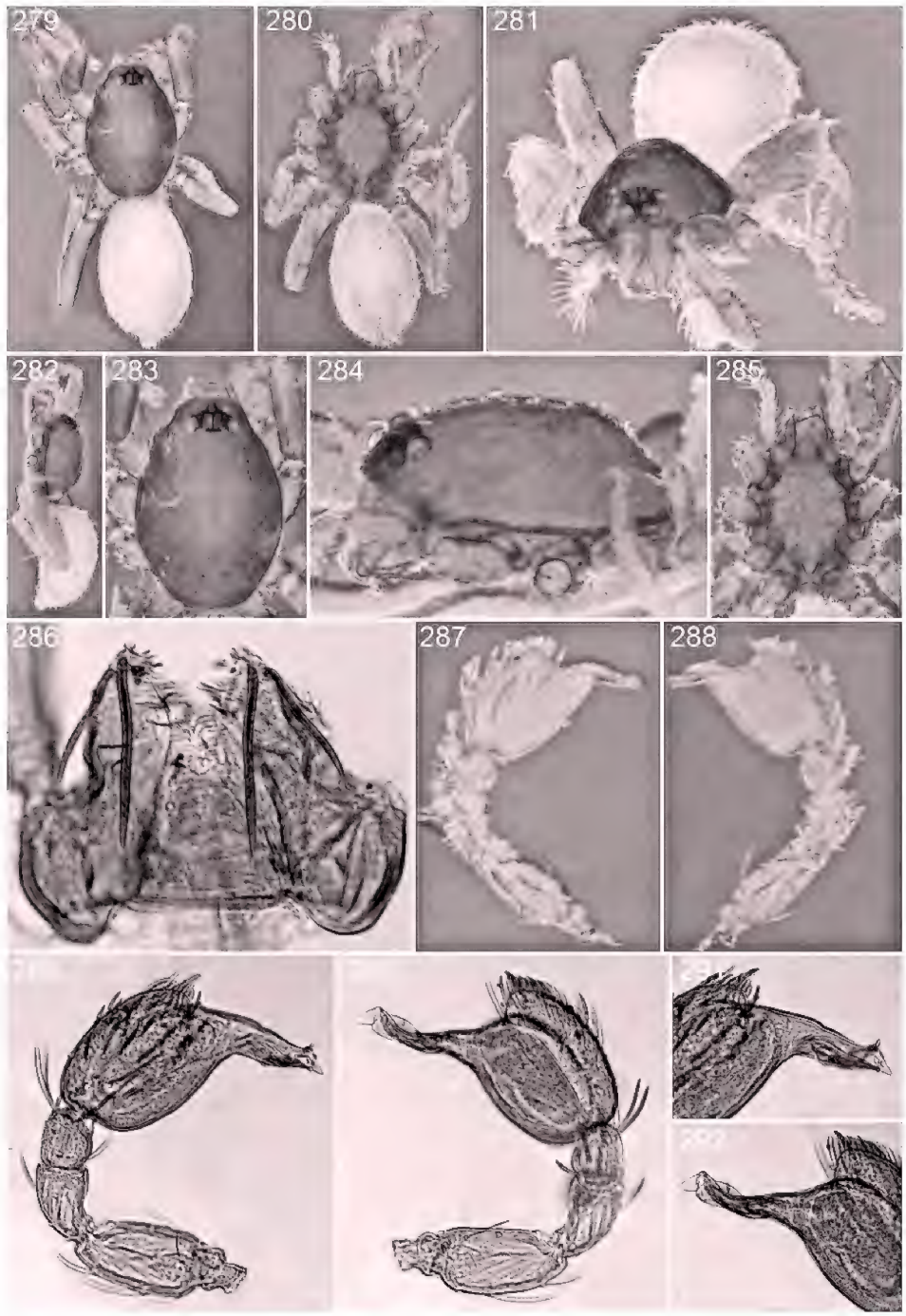
MALE (PBI_OON 27170, figs. 279–292): Total length 1.66. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front.



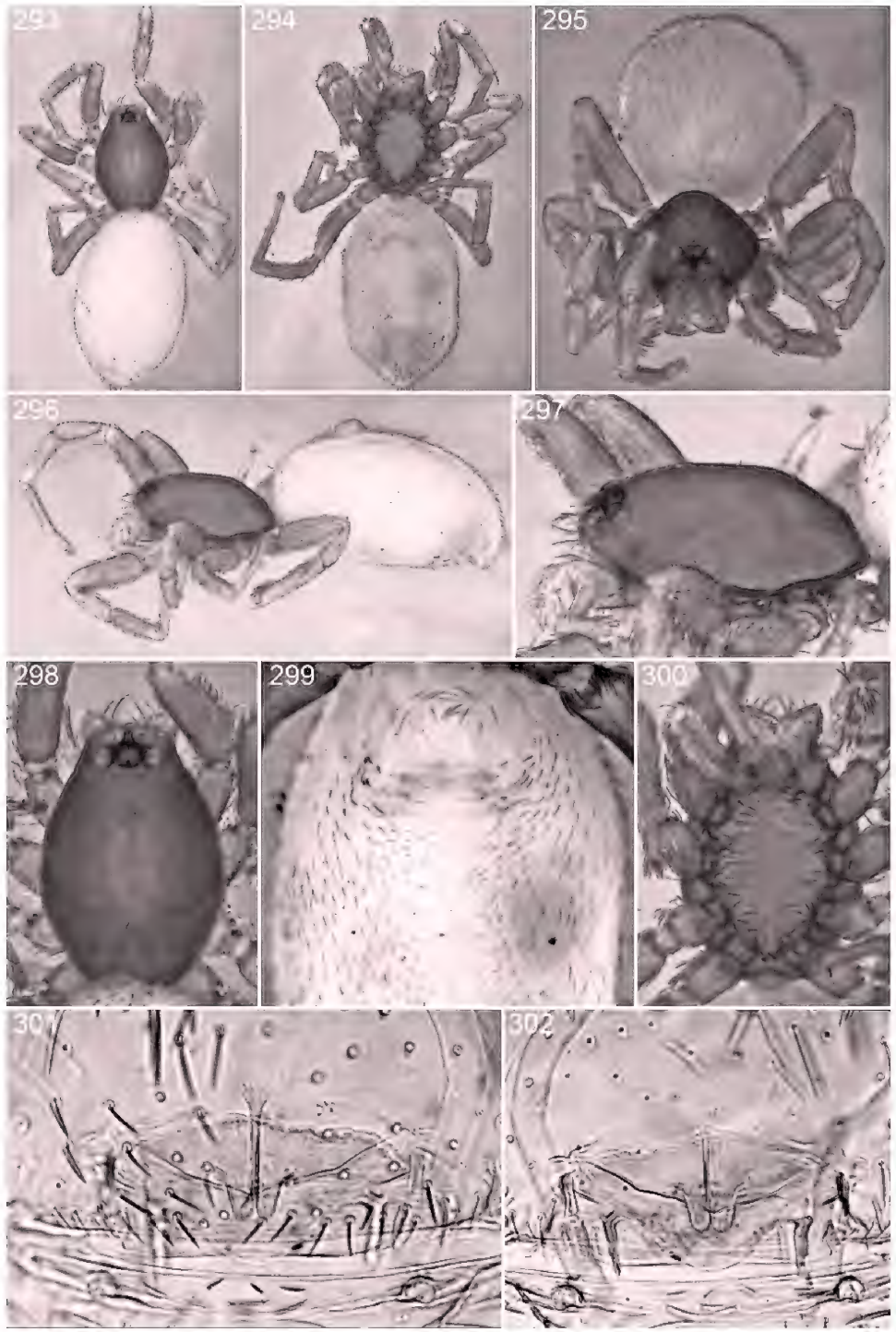
Figs. 259–268. *Stenoonops dimotus* Chickering, female. **259.** Habitus, dorsal view. **260.** Same, ventral view. **261.** Same, anterior view. **262.** Same, lateral view. **263.** Carapace, lateral view. **264.** Same, dorsal view. **265.** Epigastric area, ventral view. **266.** Sternum, ventral view. **267.** Genitalia, ventral view. **268.** Same, dorsal view.



Figs. 269–278. *Stenoonops mandeville*, new species, female. **269.** Habitus, dorsal view. **270.** Same, ventral view. **271.** Same, anterior view. **272.** Same, lateral view. **273.** Carapace, lateral view. **274.** Same, dorsal view. **275.** Epigastric area, ventral view. **276.** Sternum, ventral view. **277.** Genitalia, ventral view. **278.** Same, dorsal view.



Figs. 279–292. *Stenoonops insolitus* Chickering, male. **279.** Habitus, dorsal view. **280.** Same, ventral view. **281.** Same, anterior view. **282.** Same, lateral view. **283.** Carapace, dorsal view. **284.** Same, lateral view. **285.** Sternum, ventral view. **286.** Endites, ventral view. **287.** Left palp, prolateral view (stereoscope). **288.** Same, retrolateral view. **289.** Same, prolateral view (compound microscope). **290.** Same, retrolateral view. **291.** Embolus, prolateral view. **292.** Same, retrolateral view.



Figs. 293–302. *Stenoonops insolitus* Chickering, female. **293.** Habitus, dorsal view. **294.** Same, ventral view. **295.** Same, anterior view. **296.** Same, lateral view. **297.** Carapace, lateral view. **298.** Same, dorsal view. **299.** Epigastric area, ventral view. **300.** Sternum, ventral view. **301.** Genitalia, ventral view. **302.** Same, dorsal view.

Endites each with two long, backward-pointing macrosetae (fig. 286). Embolus long, thick, straight, tip with shorter, rounded lobe and longer, angular lobe (figs. 287–292).

FEMALE (PBI_OON 359, figs. 293–302): Total length 1.69. Anterior genitalic projection with W-shaped base, splayed tip (figs. 301, 302).

MATERIAL EXAMINED: JAMAICA: **St. Andrew:** Mona, Oct. 5, 1957 (A. Chickering, MCZ 71640, PBI_OON 27168), 1♀; Stony Hill, Oct. 18, 1957 (A. Chickering, MCZ 71637, PBI_OON 27170), 1♂. **St. Ann:** 2 mi S Moneague, May 20, 1956, litter from moist mixed woods (C. Hoff, MCZ 71636, PBI_OON 27169), 2♂. **St. Catherine:** Evarton, Nov. 29, 1957 (A. Chickering, MCZ 68232, PBI_OON 27165), 1♂; Ferry, Claremont, June 19, 1954 (A. Chickering, MCZ 71638, PBI_OON 27167), 1♂; Guanaboa Vale, Dec. 4, 1957 (A. Chickering, MCZ 71639, PBI_OON 27166), 1♂, 1♀; 3 mi E Old Harbour, Oct. 21, 1957 (A. Chickering, MCZ PBI_OON 358), 2♂, 1♀ (holotype, paratype), same (A. Chickering, MCZ PBI_OON 359), 1♂, 2♀.

DISTRIBUTION: Jamaica.

Stenoonops macabus Chickering
Figures 303–315

Stenoonops macabus Chickering, 1969: 13, figs. 29, 30 (male holotype from 3 miles east of May Pen, St. Catherine Par., Jamaica, in MCZ, examined).

DIAGNOSIS: Males can easily be recognized by their distinctive embolus, which is longer than the bulb (figs. 310–315). Although they resemble the females of *S. dimotus* and *S. mandeville* in having a recurved posterior eye row (fig. 307), differences in the shape and coloration of the femora suggest that *S. macabus* is not the male of either of those species.

MALE (PBI_OON 432, figs. 303–315): Total length 1.78. Elevated portion of pars cephalica finely reticulate; posterior eye row recurved from above, straight from front. Endites elongated, extending far beyond labium. Embolus elongate, longer than bulb, tip directed medially (figs. 310–315).

FEMALE: Unknown.

MATERIAL EXAMINED: JAMAICA: **St. Catherine:** 3 mi E May Pen, Nov. 22, 1957 (A. Chickering, MCZ 21916, PBI_OON 432), 1♂ (holotype).

DISTRIBUTION: Jamaica.

Stenoonops jara, new species
Figures 316–328

TYPE: Male holotype taken in a flight intercept trap at an elevation of 550 m at Hotel Montana, 10 km NE Jarabacoa, La Vega, Dominican Republic (July 18–Aug. 4, 1995; S., J. Peck), deposited in AMNH (PBI_OON 1777).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males can be recognized by the small bulb bearing a distally widened embolus (figs. 323–328).

MALE (PBI_OON 1777, figs. 316–328): Total length 1.84. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites abruptly narrowed anterior of coxal insertion, anterior portion short. Embolus long, sinuous, with arched retrolateral and distally expanded prolateral lobes (figs. 323–328).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Hispaniola.

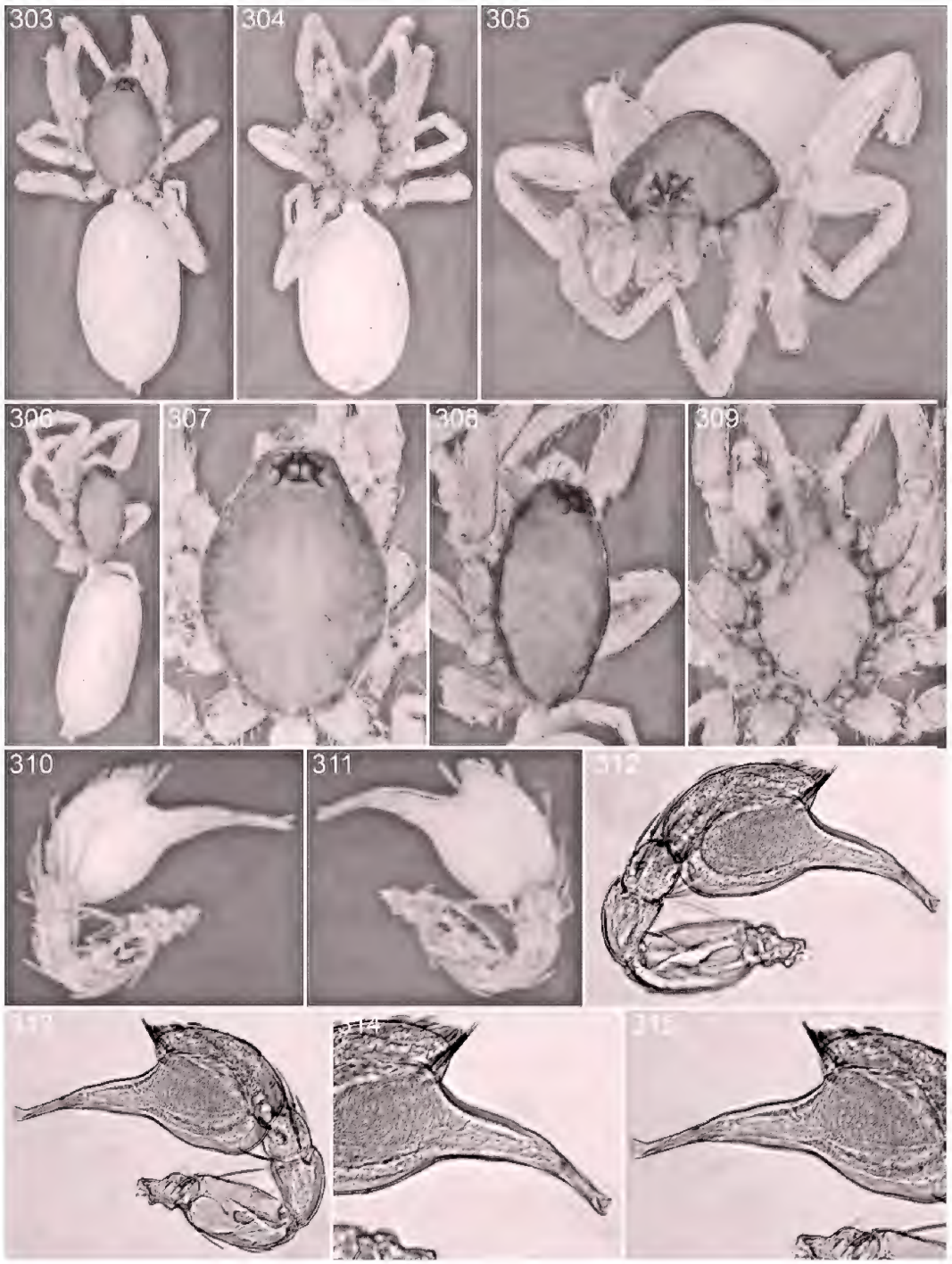
Stenoonops luquillo, new species
Figures 329–351

TYPE: Male holotype taken at an elevation of 3000 ft in the Luquillo Mountains, Puerto Rico (1944; H. Beatty), deposited in MCZ (68341, PBI_OON 26492).

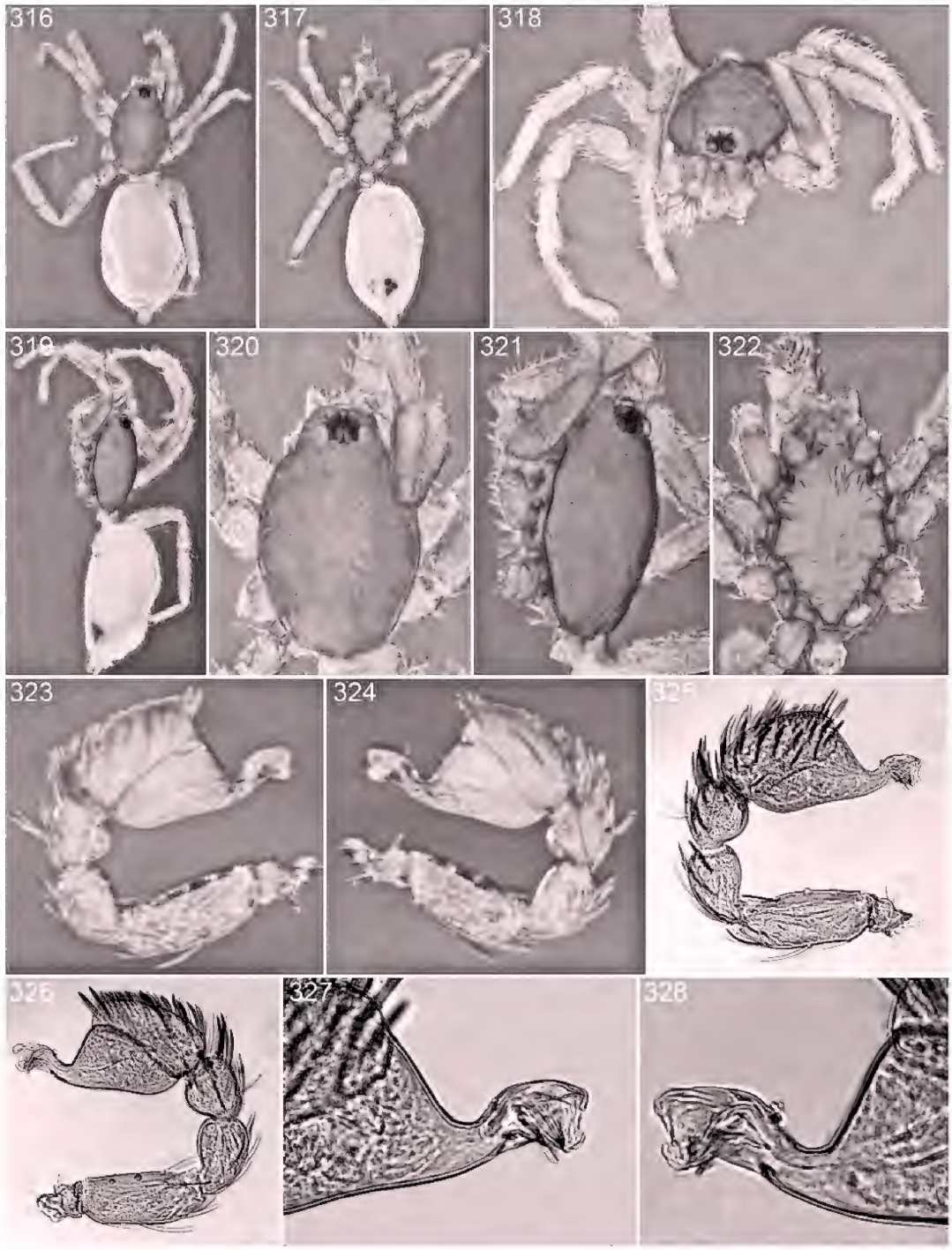
ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males can be recognized by distally indented prolateral embolar process (figs. 336–341), females by the extensive pore field capping the anterior receptaculum (figs. 350, 351).

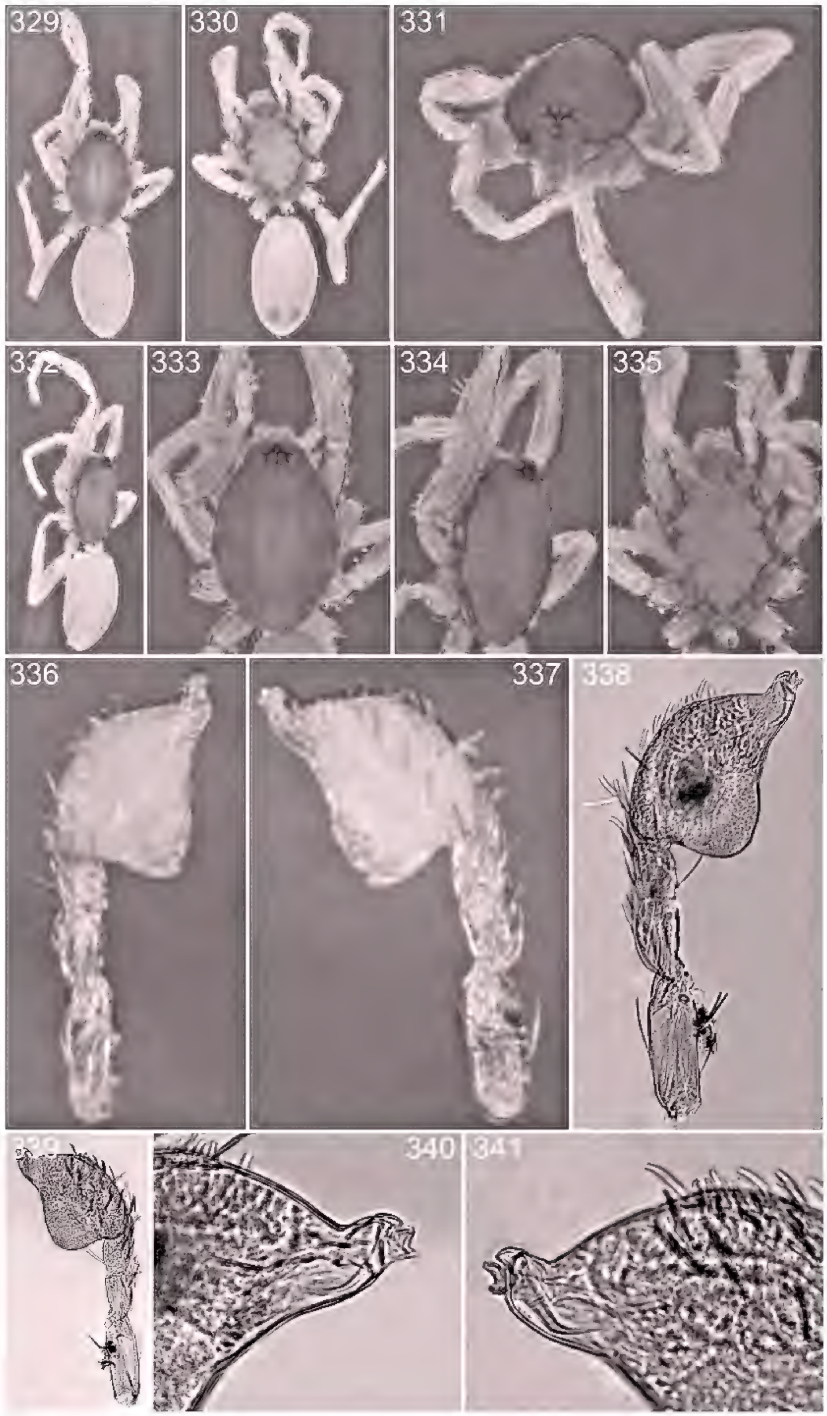
MALE (PBI_OON 26492, figs. 329–341): Total length 1.75. Elevated portion of pars cephalica reticulate; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus directed distally, prolateral



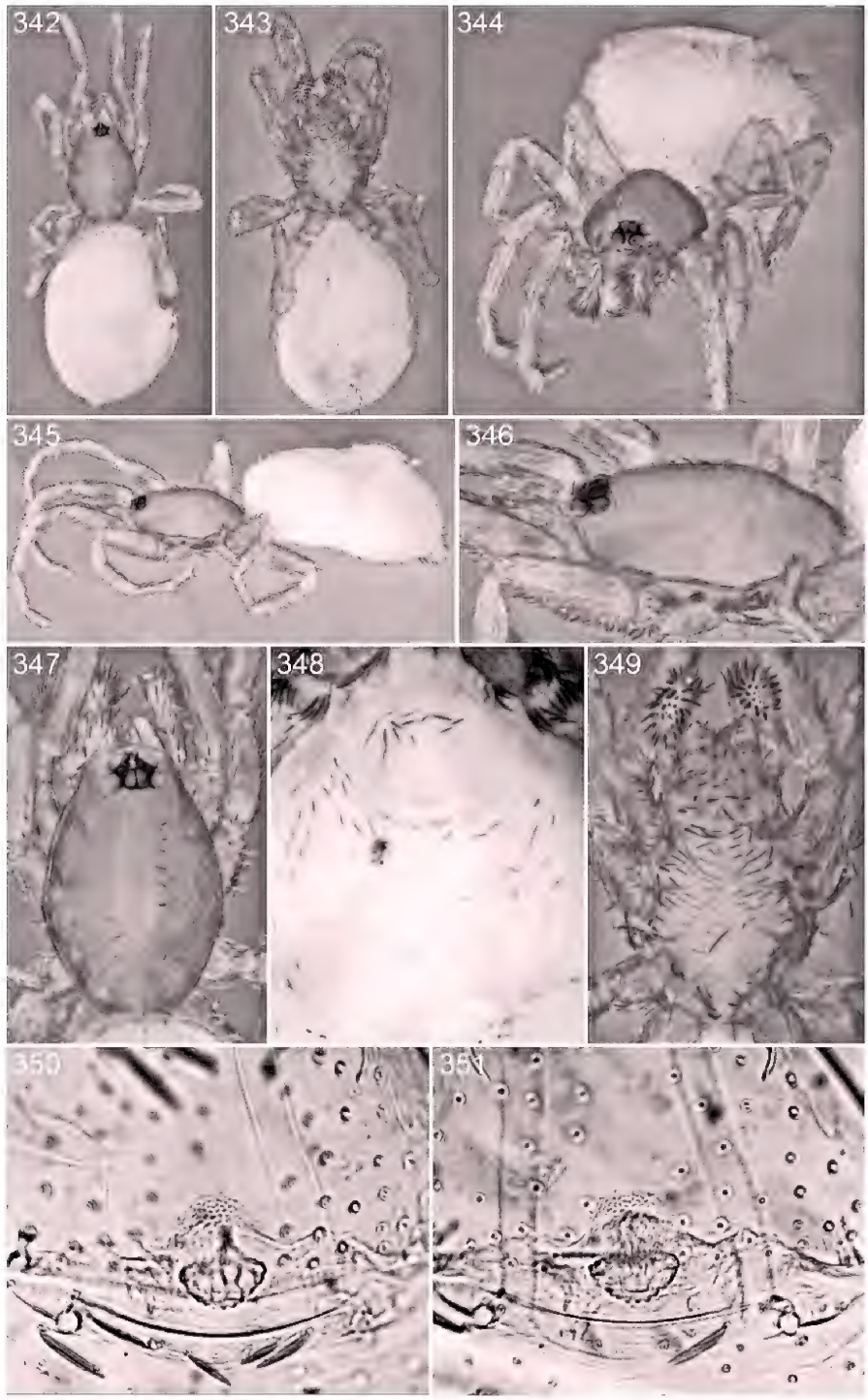
Figs. 303–315. *Stenoonops macabus* Chickering, male. **303.** Habitus, dorsal view. **304.** Same, ventral view. **305.** Same, anterior view. **306.** Same, lateral view. **307.** Carapace, dorsal view. **308.** Same, lateral view. **309.** Sternum, ventral view. **310.** Left palp, prolateral view (stereoscope). **311.** Same, retrolateral view. **312.** Same, prolateral view (compound microscope). **313.** Same, retrolateral view. **314.** Embolus, prolateral view. **315.** Same, retrolateral view.



Figs. 316–328. *Stenoonops jara* Chickering, male. **316.** Habitus, dorsal view. **317.** Same, ventral view. **318.** Same, anterior view. **319.** Same, lateral view. **320.** Carapace, dorsal view. **321.** Same, lateral view. **322.** Sternum, ventral view. **323.** Left palp, prolateral view (stereoscope). **324.** Same, retrolateral view. **325.** Same, prolateral view (compound microscope). **326.** Same, retrolateral view. **327.** Embolus, prolateral view. **328.** Same, retrolateral view.



Figs. 329–341. *Stenoonops luquillo*, new species, male. **329.** Habitus, dorsal view. **330.** Same, ventral view. **331.** Same, anterior view. **332.** Same, lateral view. **333.** Carapace, dorsal view. **334.** Same, lateral view. **335.** Sternum, ventral view. **336.** Left palp, prolateral view (stereoscope). **337.** Same, retrolateral view. **338.** Same, prolateral view (compound microscope). **339.** Same, retrolateral view. **340.** Embolus, prolateral view. **341.** Same, retrolateral view.



Figs. 342–351. *Stenoonops luquillo*, new species, female. **342.** Habitus, dorsal view. **343.** Same, ventral view. **344.** Same, anterior view. **345.** Same, lateral view. **346.** Carapace, lateral view. **347.** Same, dorsal view. **348.** Epigastric area, ventral view. **349.** Sternum, ventral view. **350.** Genitalia, ventral view. **351.** Same, dorsal view.

process with indented tip, retrolateral process sinuous (figs. 336–341).

FEMALE (PBI_OON 21072, figs. 342–351): Total length 1.96. Anterior receptaculum with rounded, anterior pore plate, posterior receptaculum with crinkled posterior margin (figs. 350, 351).

OTHER MATERIAL EXAMINED: PUERTO RICO: Cabeza de Perro Island, Jan. 16, 1965 (H. Heatwole, F. McKenzie, AMNH PBI_OON 21072), 1♀.

DISTRIBUTION: Puerto Rico.

Stenoonops pretiosus (Bryant), new combination
Figures 352–390, 397–430

Oonopinus pretiosus Bryant, 1942: 322, figs. 2, 9 (male holotype and female allotype from St. Croix, Virgin Islands, in MCZ; examined).

DIAGNOSIS: Males resemble those of *S. luquillo* but have a smaller and simpler embolus (figs. 359–364); females also resemble those of *S. luquillo* but have a differently shaped posterior receptaculum (figs. 405, 406).

MALE (PBI_OON 27355, figs. 352–390): Total length 1.89. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with strong, toothlike projection (but serrula still present). Embolus short, tubular, with retrolateral opening (figs. 359–364, 388–390).

FEMALE (PBI_OON 27357, figs. 397–430): Total length 1.93. Anterior receptaculum with rounded anterior poreplate, posterior receptaculum diamond shaped (figs. 405, 406, 417–420).

MATERIAL EXAMINED: VIRGIN ISLANDS: **St. Croix:** Christiansted (Beatty, MCZ PBI_OON 380), 1♂, 1♀ (holotype, allotype), same (MCZ 66802, PBI_OON 27349), 2♂; near Experiment Station, 7 mi W Frederiksted, Mar. 18, 1964 (A. Chickering, MCZ 71406, PBI_OON 27356), 5♀; Frederiksted, Mar. 14, 1964 (A. Chickering, MCZ 71403, 71404, PBI_OON 27353, 27357), 4♂, 7♀; Lavaetz gardens, Frederiksted, Mar. 24, 1964 (A. Chickering, MCZ 71405, PBI_OON 27355), 1♂, 3♀; Mahogany Road, 1 mi from Frederiksted, Mar. 23, 1964 (A. Chickering, MCZ 71408, PBI_OON 27352), 1♀; West Indies Lab, June 7, 1972, ground litter under tree (W. Muchmore, FSCA PBI_OON 26344), 2♂, 6♀.

DISTRIBUTION: Virgin Islands (St. Croix).

Stenoonops saintjohn, new species
Figures 431–459

TYPES: Male holotype and female allotype taken in debris along wall of mill on Catharineberg Estate, St. John, Virgin Islands (July 20, 1975; W. Muchmore), deposited in AMNH (PBI_OON 1814).

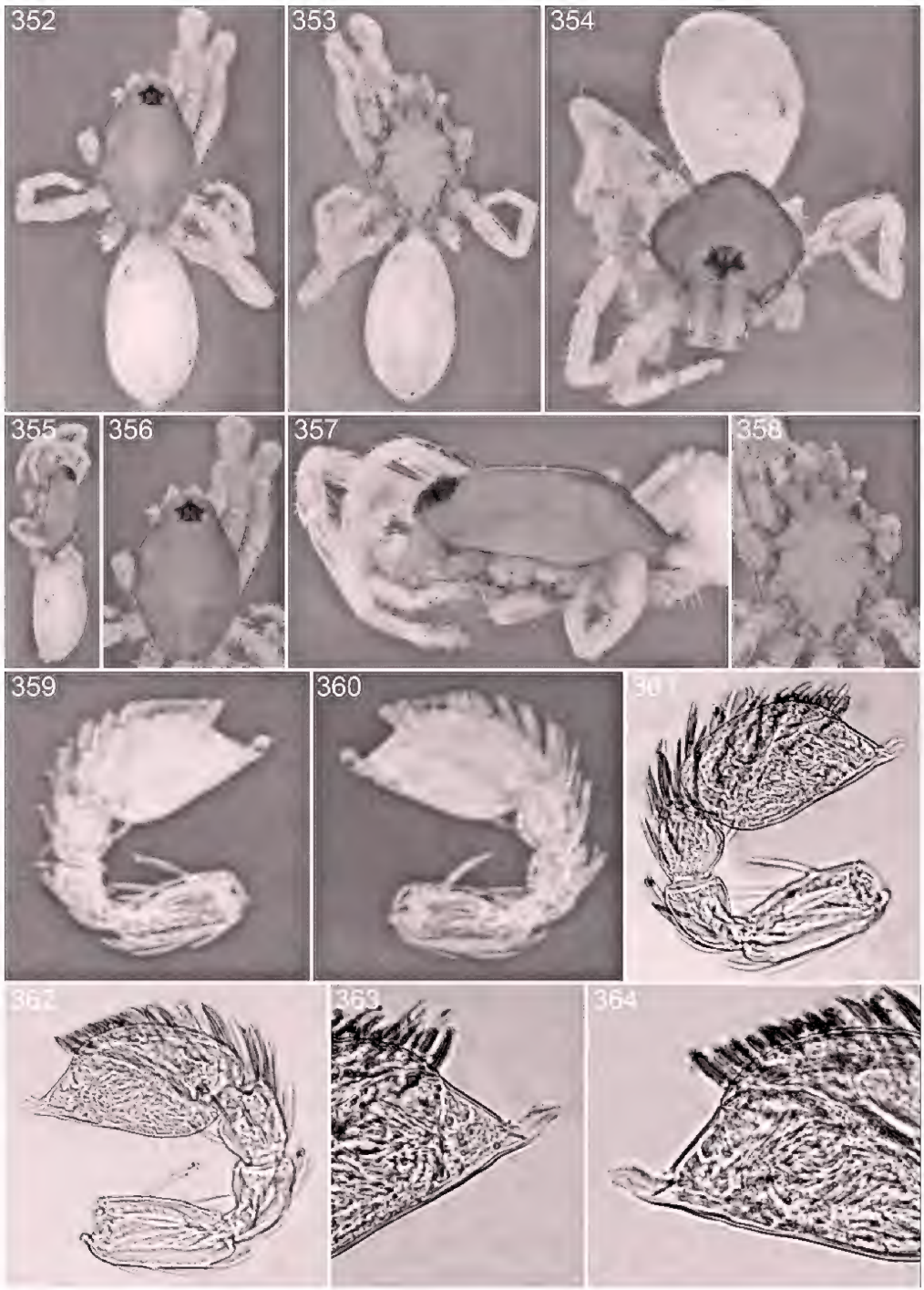
ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males resemble those of *S. tortola* and *S. exgord* but can be distinguished by the scooped-out prolateral surface of the embolus (figs. 438–443); females can be recognized by the rectangular base of the anterior genitalic projection (figs. 452, 453).

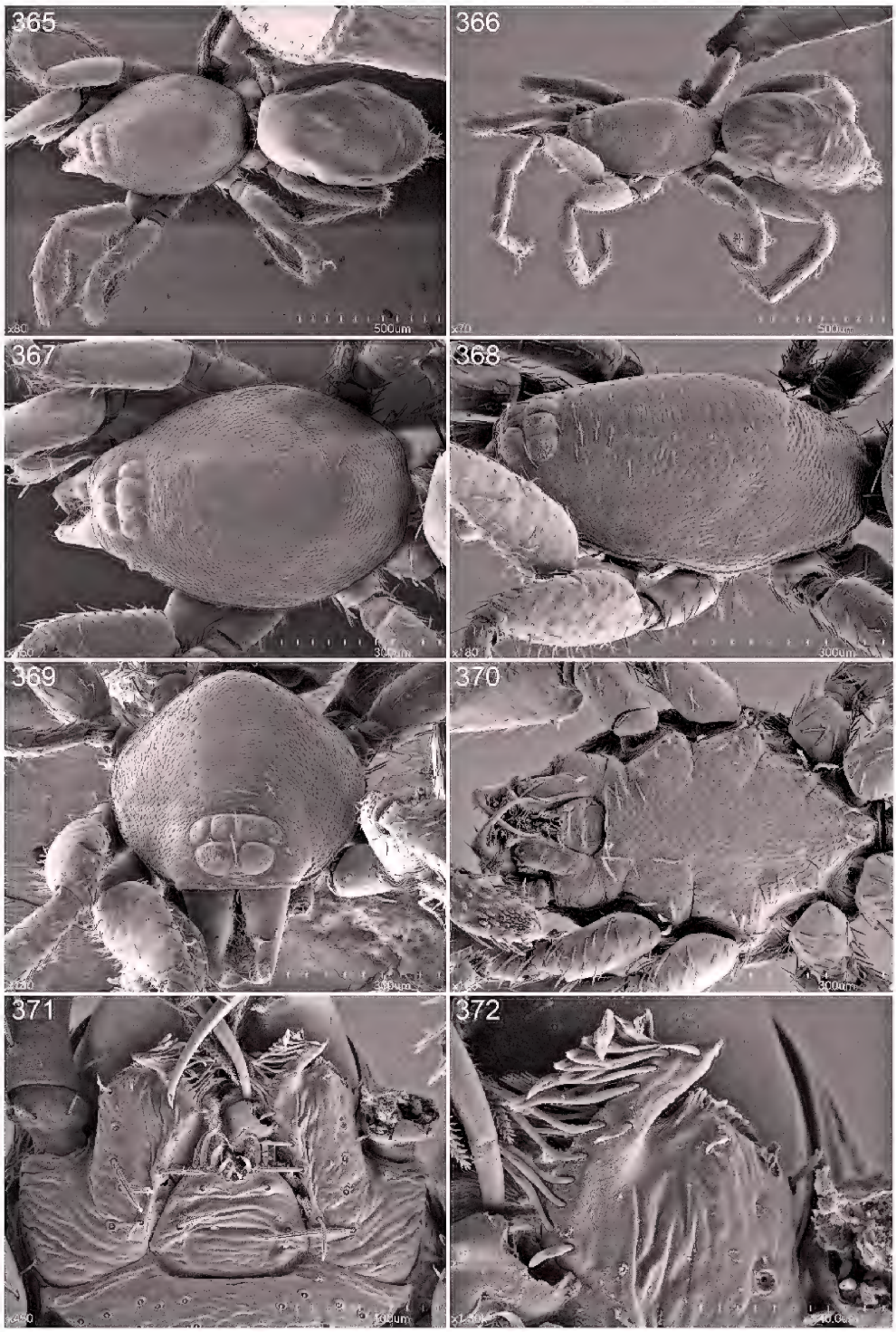
MALE (PBI_OON 1814, figs. 431–443, 454–457): Total length 2.17. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites anteriorly flattened. Palp embolus prolateral surface scooped out between edges (figs. 438–443).

FEMALE (PBI_OON 1814, figs. 444–453, 458, 459): Total length 2.55. Anterior genitalic projection short, originating from rectangular base (figs. 452, 453).

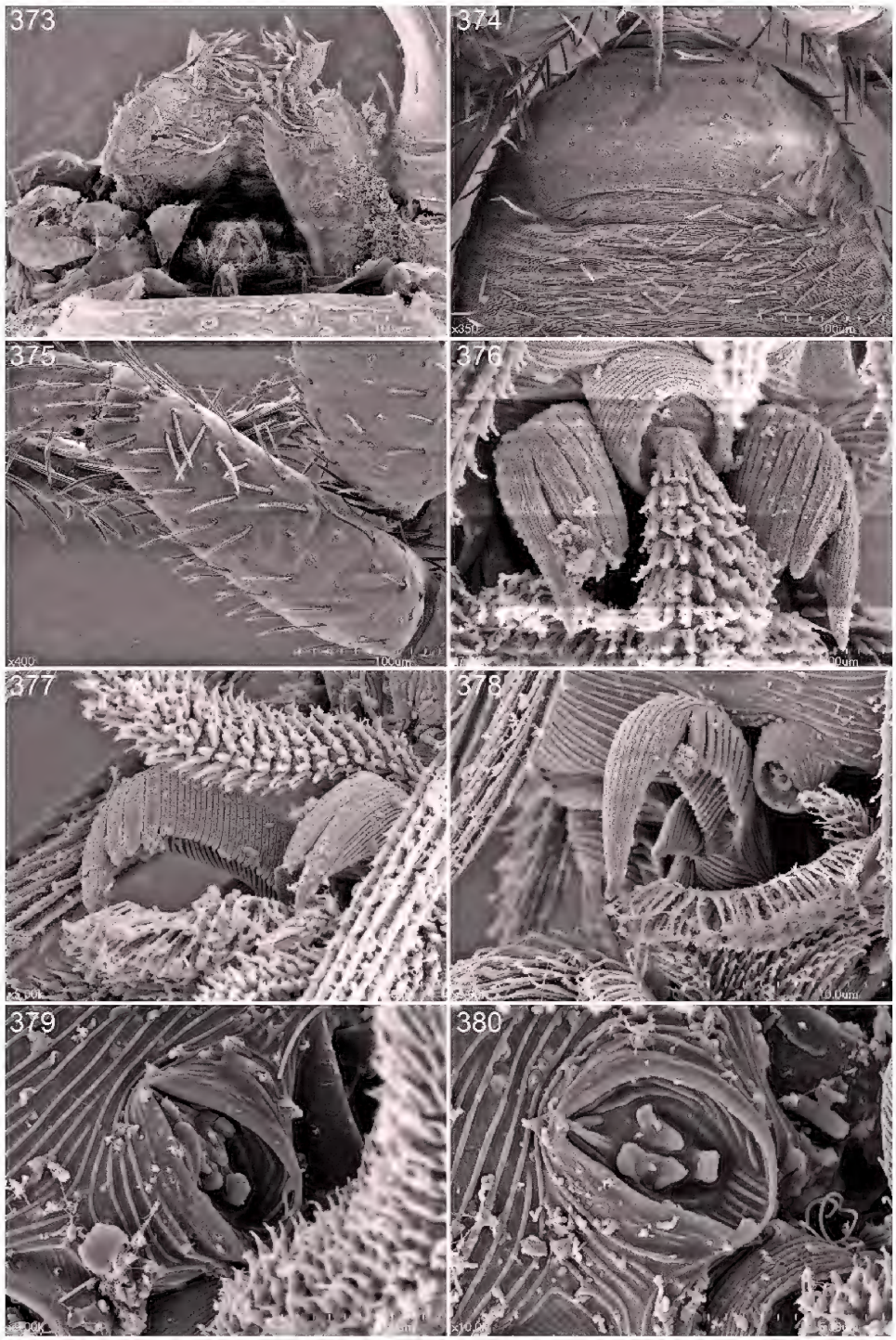
OTHER MATERIAL EXAMINED: VIRGIN ISLANDS: **St. John:** no specific locality. July 25, 1966 (A. Chickering, MCZ 71410, PBI_OON 27351), 1♀; Catharineberg, Oct. 15, 1980, litter under trees (W. Muchmore, FSCA PBI_OON 26345), 2♂; Catharineberg Estate, July 20, 1975, debris along wall of mill (W. Muchmore, AMNH PBI_OON 1814), 1♂, 1♀; Cinnamon Bay Nature Trail, June 4–6, 1980, litter at base of trees, logs (W. Muchmore, FSCA PBI_OON 26346), 1♀; Coral Bay, gut near Butler's house, July 19, 1975, unidentified guano on rock (W. Muchmore, AMNH PBI_OON 1818), 1♀; Little Lameshur Bay, June 9, 1979, under rocks on road (W. Muchmore, FSCA PBI_OON 26349), 2♀, June 18, 1980, among rocks near shore (W. Muchmore, FSCA PBI_OON 26348), 2♀; Reef Bay Trail head, July 20, 1975, debris along old wall (W. Muchmore, AMNH PBI_OON 1802), 1♂; Trunk Bay,



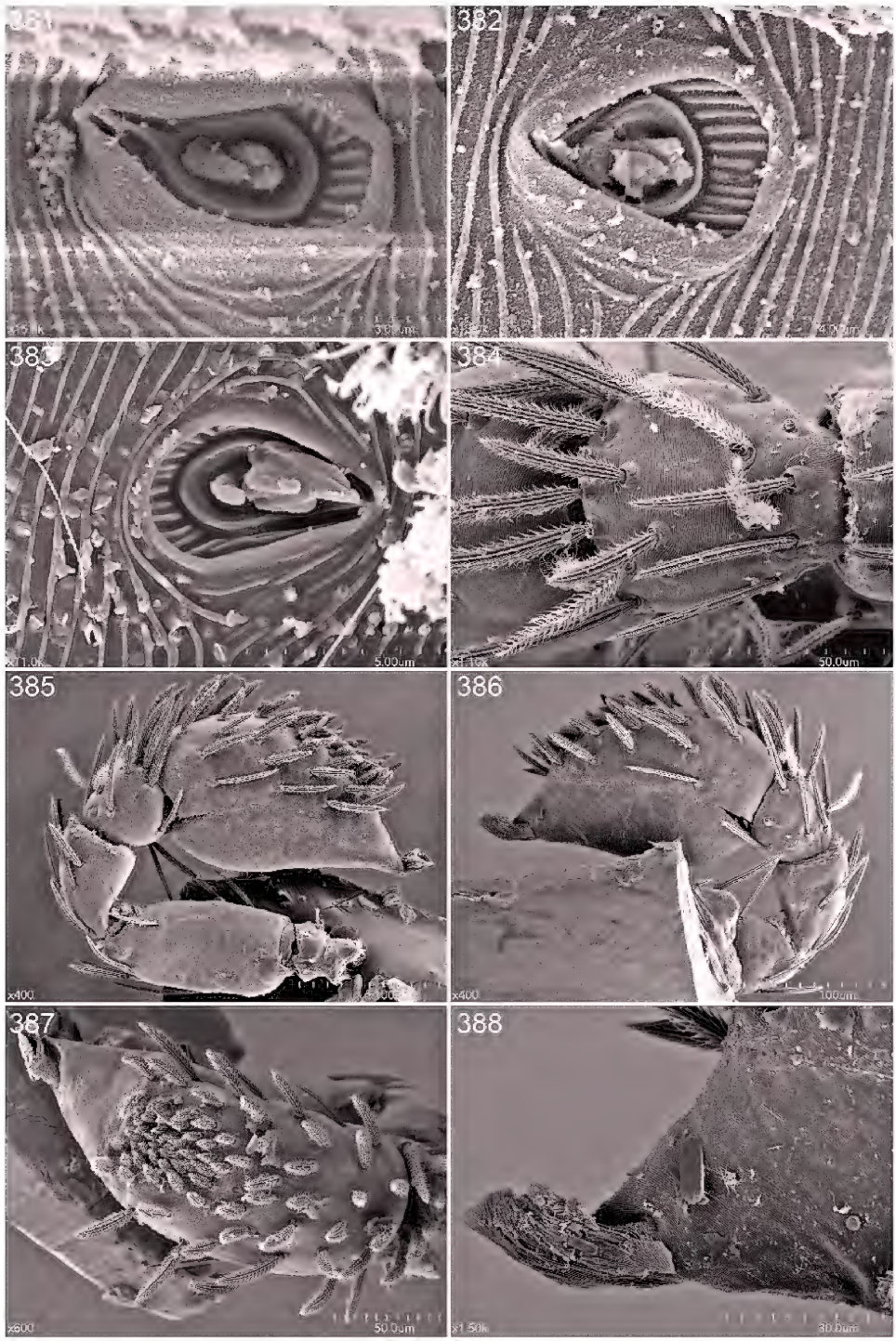
Figs. 352–364. *Stenoonops pretiosus* (Bryant), male. **352.** Habitus, dorsal view. **353.** Same, ventral view. **354.** Same, anterior view. **355.** Same, lateral view. **356.** Carapace, dorsal view. **357.** Same, lateral view. **358.** Sternum, ventral view. **359.** Left palp, prolateral view (stereoscope). **360.** Same, retrolateral view. **361.** Same, prolateral view (compound microscope). **362.** Same, retrolateral view. **363.** Embolus, prolateral view. **364.** Same, retrolateral view.



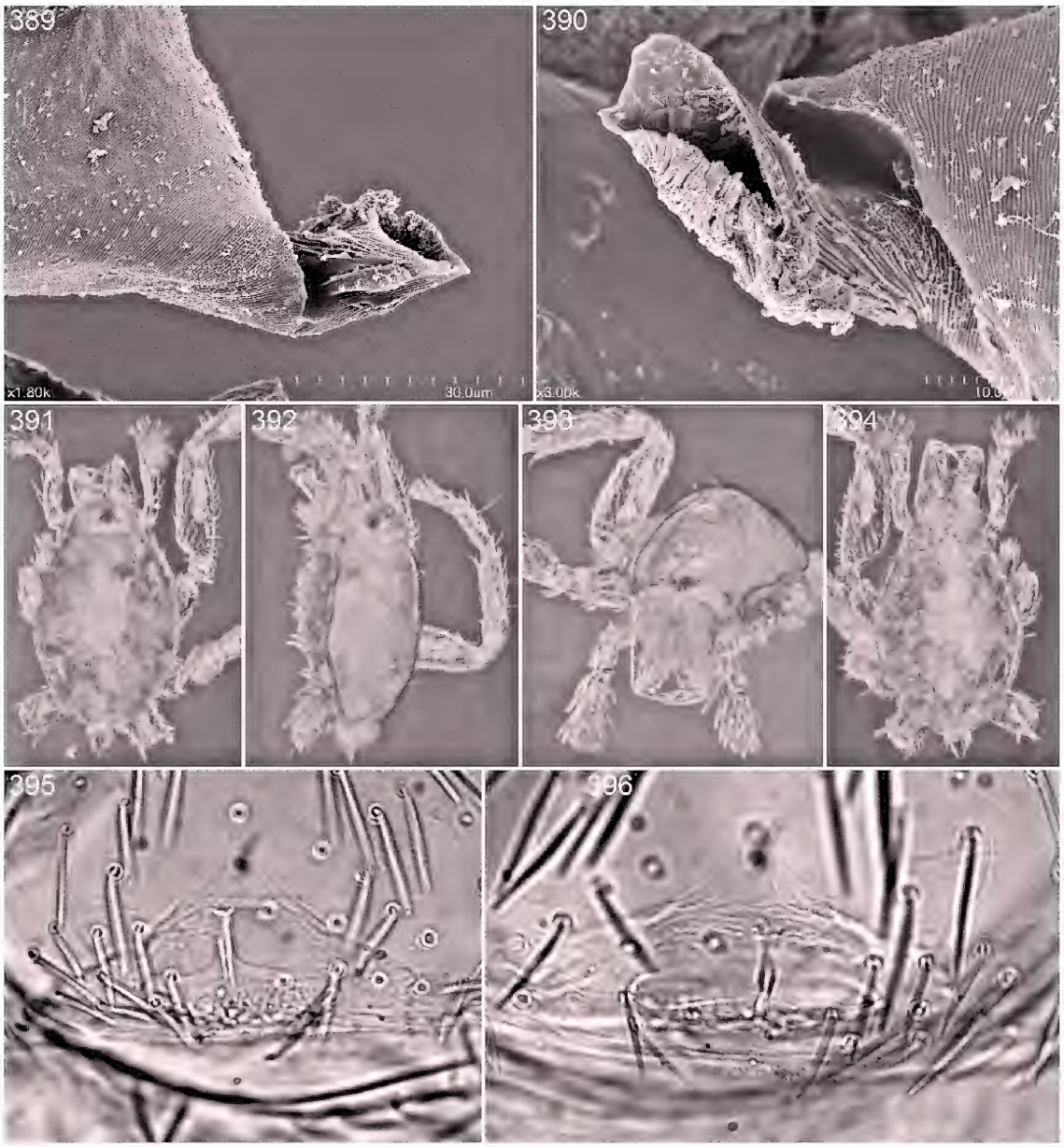
Figs. 365–372. *Stenoonops pretiosus* (Bryant), male. **365.** Habitus, dorsal view. **366.** Same, lateral view. **367.** Carapace, dorsal view. **368.** Same, lateral view. **369.** Same, anterior view. **370.** Sternum, ventral view. **371.** Labium and endites, ventral view. **372.** Left endite tip, same.



Figs. 373–380. *Stenoonops pretiosus* (Bryant), male. **373.** Labrum and endites, dorsal view. **374.** Epigastric area, ventral view. **375.** Femur II, dorsal view. **376.** Claws of leg I, distal view. **377.** Claws of leg II, oblique lateral view. **378.** Claws of leg IV, distal view. **379.** Tarsal organ, leg I, dorsal view. **380.** Same, leg II.

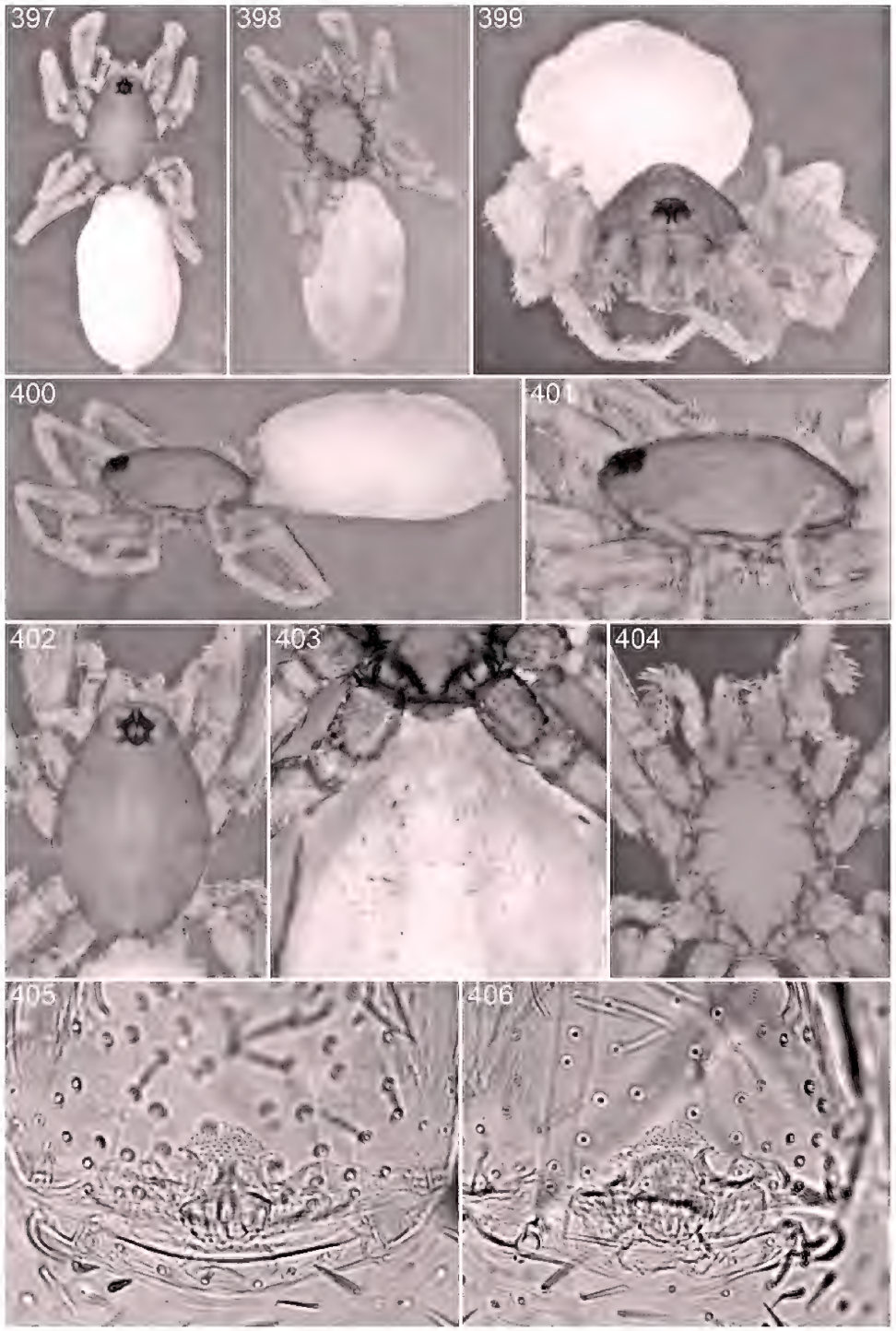


Figs. 381–388. *Stenoonops pretiosus* (Bryant), male. **381.** Tarsal organ, leg III, dorsal view. **382.** Same, leg IV. **383.** Same, palp. **384.** Palpal tibia, dorsal view. **385.** Left palp, prolateral view. **386.** Same, retrolateral view. **387.** Palpal tarsus, dorsal view. **388.** Palpal bulb, retrolateral view.

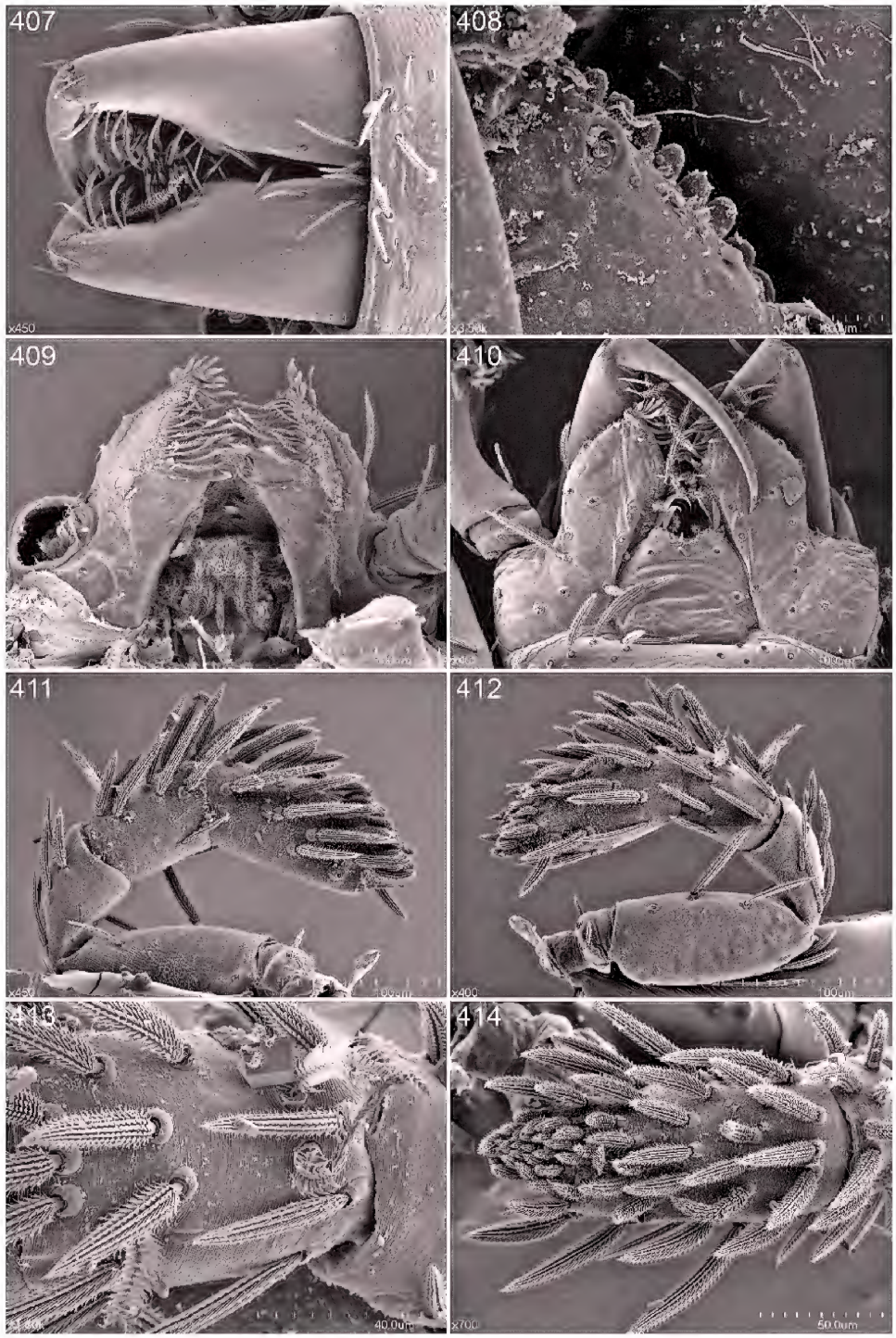


Figs. 389–396. **389**, **390.** *Stenoonops pretiosus* (Bryant), male, embolus, prolateral and retrolateral views. 391–396. *Stenoonops exgord*, new species, female. **391.** Carapace, dorsal view. **392.** Same, lateral view. **393.** Same, anterior view. **394.** Sternum, ventral view. **395.** Genitalia, ventral view. **396.** Same, dorsal view.

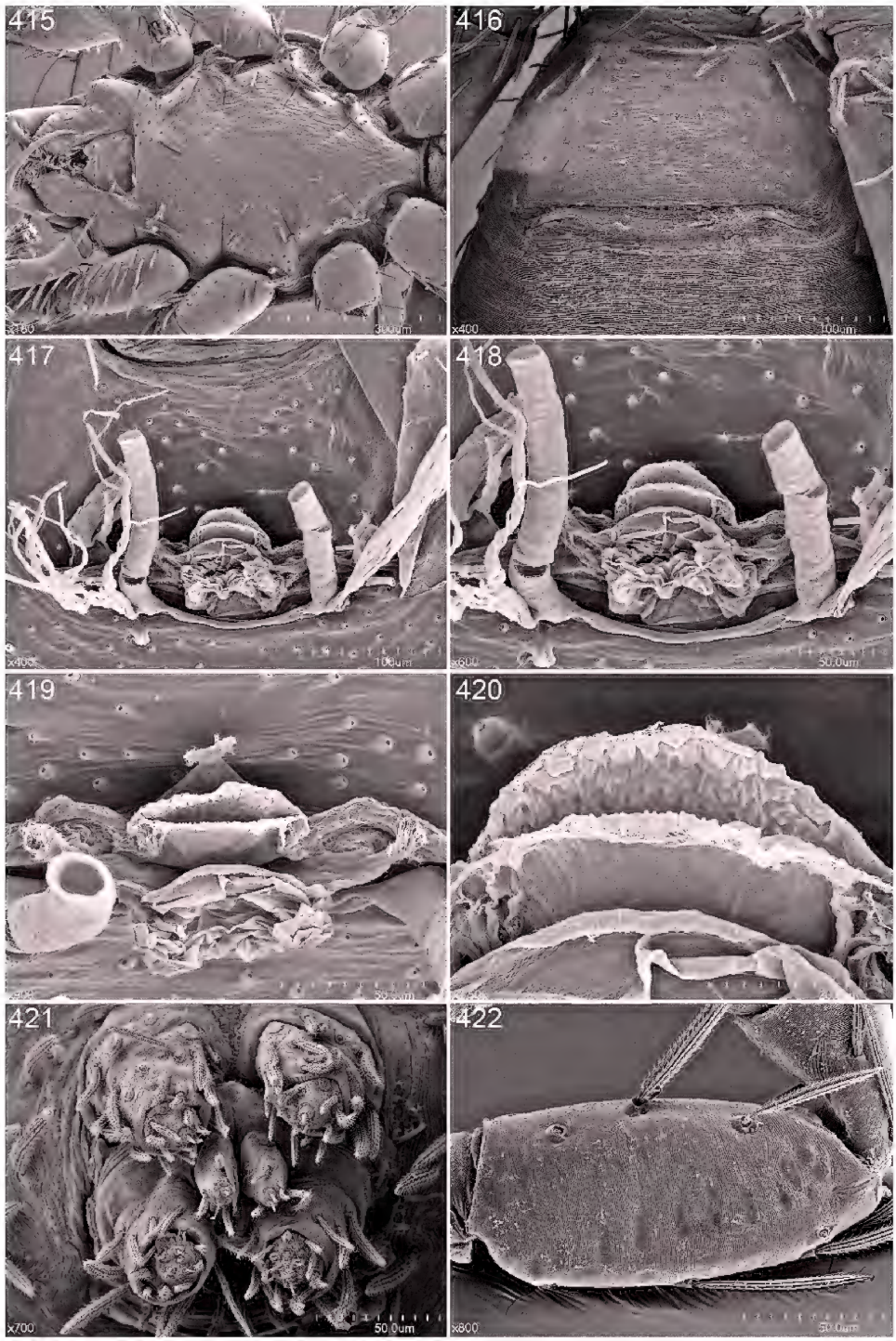
June 8, 1980, coconut palm leaf axils (W. Muchmore, FSCA PBI_OON 26347), 1♀. **St. Thomas:** no specific locality, July 14, 1966 (A. Chickering, MCZ PBI_OON 386), 1♀, July 18, 1966 (A. Chickering, MCZ 71427, PBI_OON 26513), 2♀, July 27, 1966 (A. Chickering, MCZ 71429, PBI_OON 26494), 1♀, Aug. 29, 1966 (A. Chickering, MCZ PBI_OON 387), 1♀; Blue Beard's Castle, Feb. 18, 1964 (A. Chickering, MCZ PBI_OON 28124), 1♀; E side, Charlotte Amalie, Feb. 1964, vacant lots (A. Chicker-



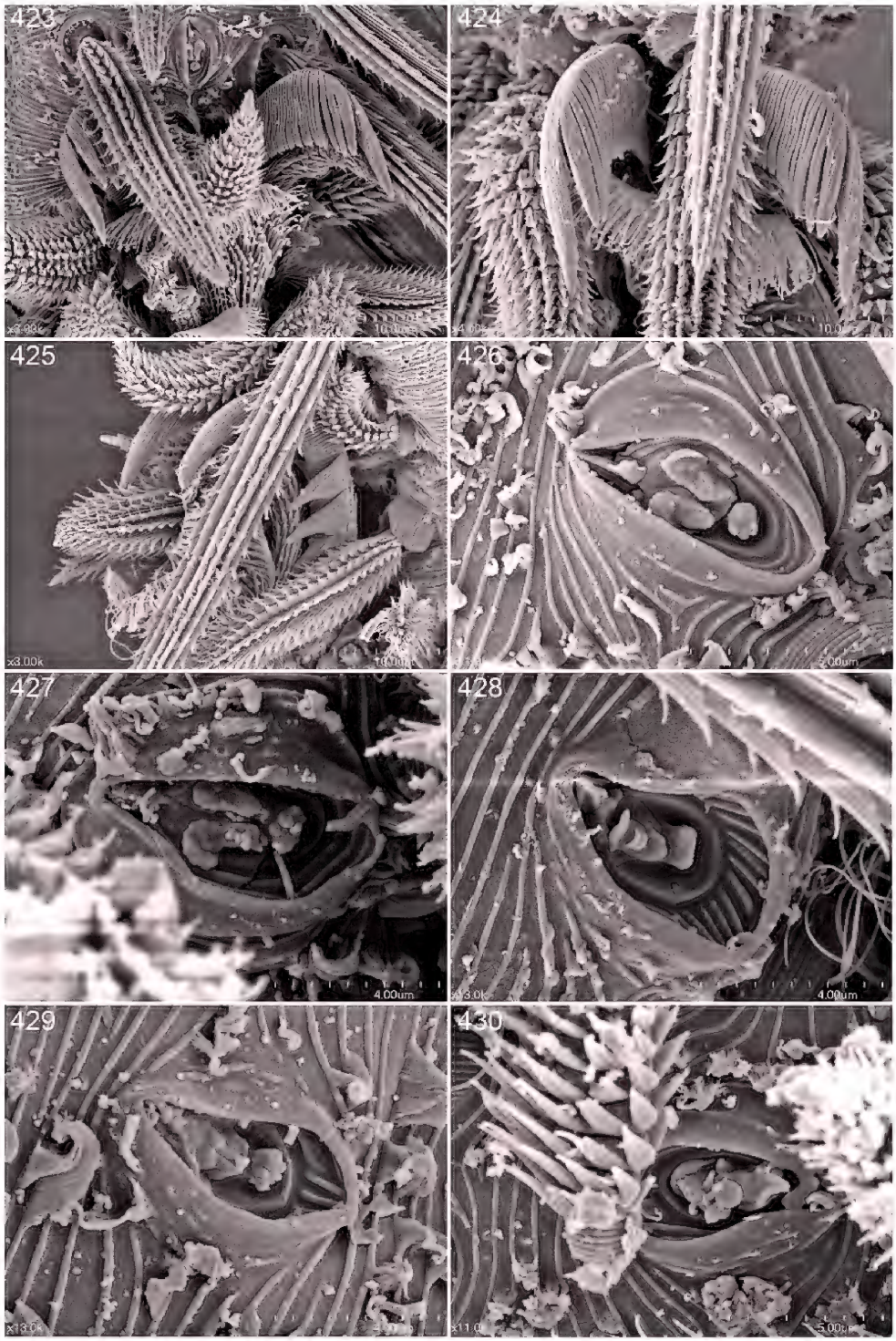
Figs. 397–406. *Stenoonops pretiosus* (Bryant), female. **397.** Habitus, dorsal view. **398.** Same, ventral view. **399.** Same, anterior view. **400.** Same, lateral view. **401.** Carapace, lateral view. **402.** Same, dorsal view. **403.** Epigastric area, ventral view. **404.** Sternum, ventral view. **405.** Genitalia, ventral view. **406.** Same, dorsal view.



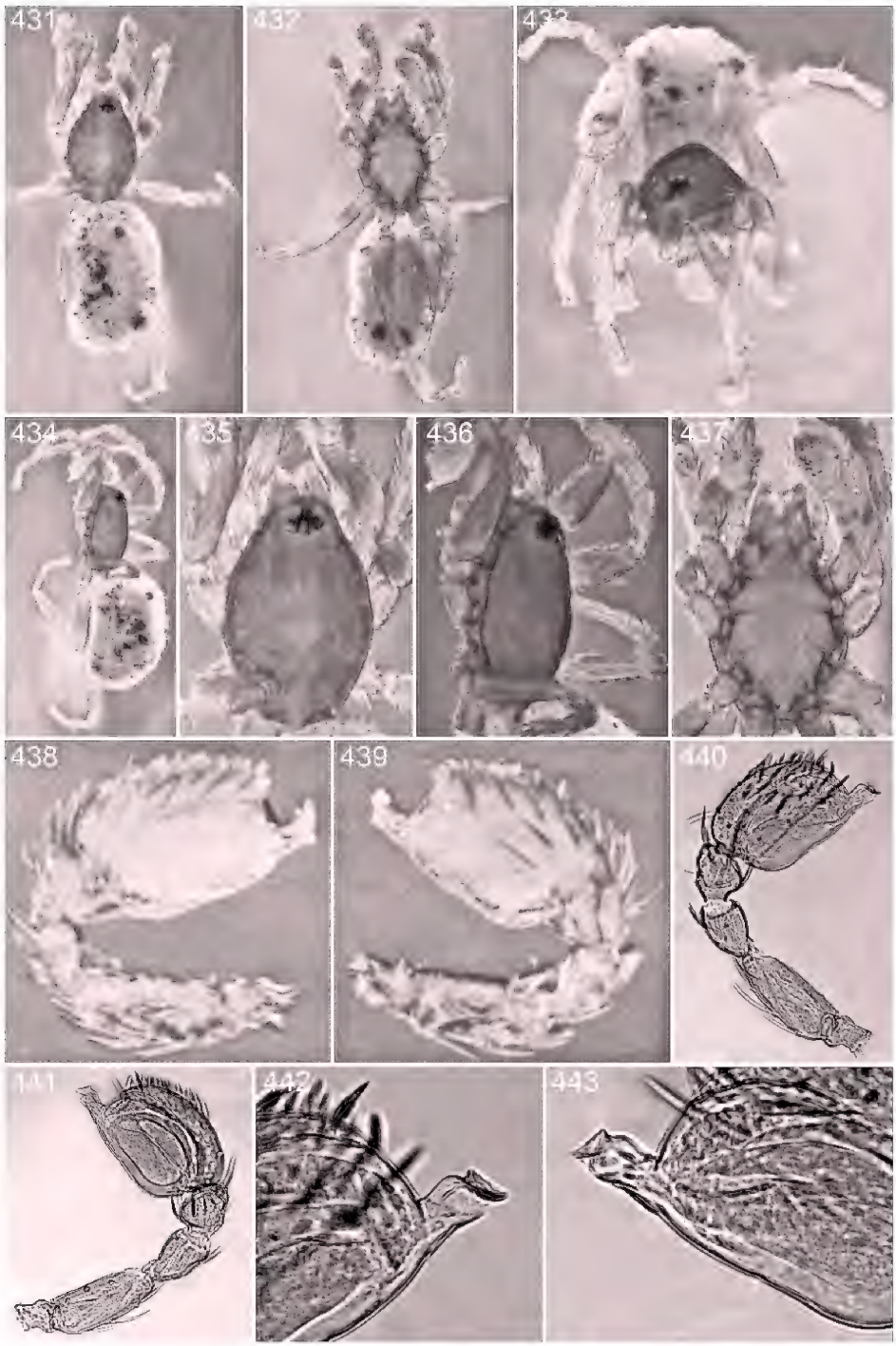
Figs. 407–414. *Stenoonops pretiosus* (Bryant), female. **407.** Chelicerae, anterior view. **408.** Serrula, ventral view. **409.** Labrum and endites, dorsal view. **410.** Labium and endites, ventral view. **411.** Palp, prolateral view. **412.** Same, retrolateral view. **413.** Palpal tibia, dorsal view. **414.** Palpal tarsus, same.



Figs. 415–422. *Stenoonops pretiosus* (Bryant), female. **415.** Sternum, ventral view. **416.** Epigastric area, same. **417.** Genitalia, digested, dorsal view. **418.** Same, close-up. **419.** Genitalia, anterior view. **420.** Same, close-up. **421.** Spinnerets, distal view. **422.** Palpal femur, retrolateral view.

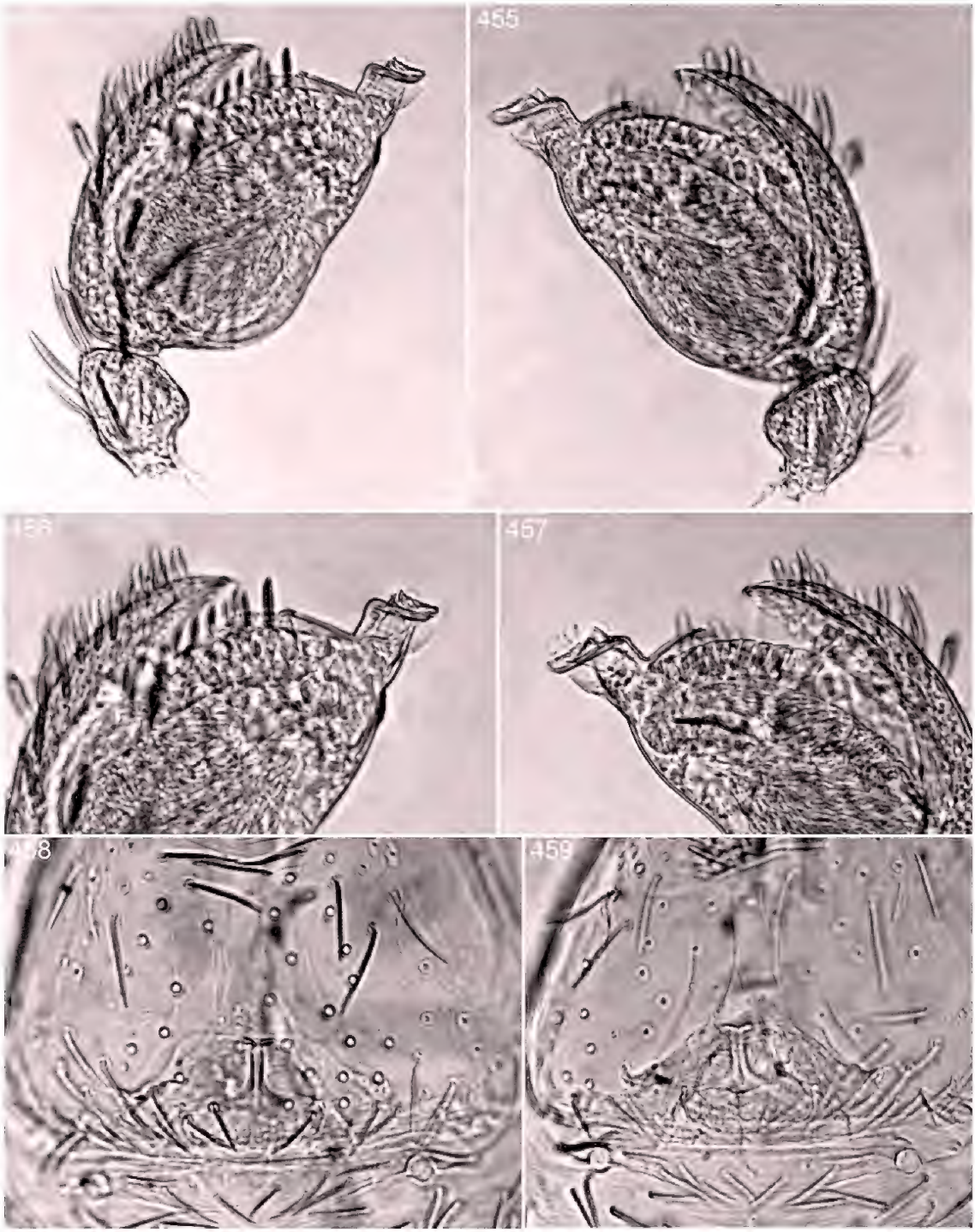


Figs. 423–430. *Stenoonops pretiosus* (Bryant), female. **423.** Claws of leg I, distal view. **424.** Same, leg II. **425.** Same, leg IV. **426.** Tarsal organ, leg I, dorsal view. **427.** Same, leg II. **428.** Same, leg III. **429.** Same, leg IV. **430.** Same, palpal tarsus.



Figs. 431–443. *Stenoonops saintjohn*, new species, male. **431.** Habitus, dorsal view. **432.** Same, ventral view. **433.** Same, anterior view. **434.** Same, lateral view. **435.** Carapace, dorsal view. **436.** Same, lateral view. **437.** Sternum, ventral view. **438.** Left palp, prolateral view (stereoscope). **439.** Same, retrolateral view. **440.** Same, prolateral view (compound microscope). **441.** Same, retrolateral view. **442.** Embolus, prolateral view. **443.** Same, retrolateral view.

Figs. 444–453. *Stenoonops saintjohn*, new species, female. **444.** Habitus, dorsal view. **445.** Same, ventral view. **446.** Same, anterior view. **447.** Same, lateral view. **448.** Carapace, lateral view. **449.** Same, dorsal view. **450.** Epigastric area, ventral view. **451.** Sternum, ventral view. **452.** Genitalia, ventral view. **453.** Same, dorsal view.



Figs. 454–459. *Stenoonops saintjohn*, new species, specimens from St. Thomas, Virgin Islands. **454.** Left male palp, prolateral view. **455.** Same, retrolateral view. **456.** Embolus, prolateral view. **457.** Same, retrolateral view. **458.** Female genitalia, ventral view. **459.** Same, dorsal view.

ing, MCZ PBI_OON 28116), 1♂, 1♀; foot, Redhook Hill and Benner Hill, July 8, 1958, beating and sweeping (M. Sanderson, AMNH PBI_OON 28123), 1♀.

VARIATION: We have detected no significant genitalic differences among the specimens from St. John and St. Thomas (figs. 454–459).

DISTRIBUTION: Virgin Islands (St. John, St. Thomas).

Stenoonops tortola, new species
Figures 460–481

TYPE: Male holotype from Little Thatch Island (situated just off the west end of Tortola), Virgin Islands (Aug. 16, 1965; Island Project staff), deposited in AMNH (PBI_OON 1821).

ETYMOLOGY: The specific name is a noun in apposition taken from one of the localities.

DIAGNOSIS: Males resemble those of *S. saintjohn* but have a differently shaped, prolateral process situated proximally of a triangular retrolateral process (figs. 467–472); females have a longer anterior genitalic projection originating on a less rectangular base (figs. 480, 481).

MALE (PBI_OON 1821, figs. 460–472): Total length 1.25. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with medially directed anterolateral projection. Embolus with dorsal process directed retrolaterally (figs. 467–472).

FEMALE (PBI_OON 1799, figs. 473–481): Total length 1.60. Anterior genitalic projection originating from oval base (figs. 480, 481).

OTHER MATERIAL EXAMINED: VIRGIN ISLANDS: **Tortola:** Green Cay, Aug. 14, 1965 (Island Project staff, AMNH PBI_OON 1801), 1♀; Sandy Spit, Aug. 14, 1965 (Island Project staff, AMNH PBI_OON 1799), 1♀.

DISTRIBUTION: Virgin Islands (Tortola and Little Thatch islands).

Stenoonops exgord, new species
Figures 391–396, 482–494

TYPE: Male holotype from Virgin Gorda, Virgin Islands (Aug. 1966; A. Chickering), deposited in MCZ (PBI_OON 40817).

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: Males can be recognized by the prolaterally directed tip of the embolus (figs. 489–494), females by the long, narrow anterior genitalic projection (figs. 395, 396).

MALE (PBI_OON 40817, figs. 482–494): Total length 1.30. Elevated portion of pars cephalica reticulate; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus with prolaterally directed tip (figs. 489–494).

FEMALE (PBI_OON 385, figs. 391–396): Total length 1.67. Anterior genitalic process long, narrow (figs. 395, 396).

OTHER MATERIAL EXAMINED: VIRGIN ISLANDS: **Virgin Gorda:** Virgin Gorda Mountain, June 21, 1966 (Island Project staff, AMNH PBI_OON 385), 1♀.

DISTRIBUTION: Virgin Islands (Virgin Gorda).

Stenoonops saba, new species
Figures 495–504

TYPE: Female holotype taken by beating/sweeping/sifting shrubs at an elevation of 191 m about 2 km in on the S3 trail to Spring Bay, 17.6333°N, 63.224°W, Saba Island, Netherlands Antilles (Mar. 10, 2008; J. Slowik), deposited in UAM (15560 PBI_OON 40815).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females can be recognized by the wide, triangular posterior receptaculum (figs. 503, 504).

MALE: Unknown.

FEMALE (PBI_OON 40815, figs. 495–504): Total length 1.69. Elevated portion of pars cephalica reticulate, posterior eye row straight from above, procurved from front. Posterior receptaculum triangular, about as long as anterior projection (figs. 503, 504).

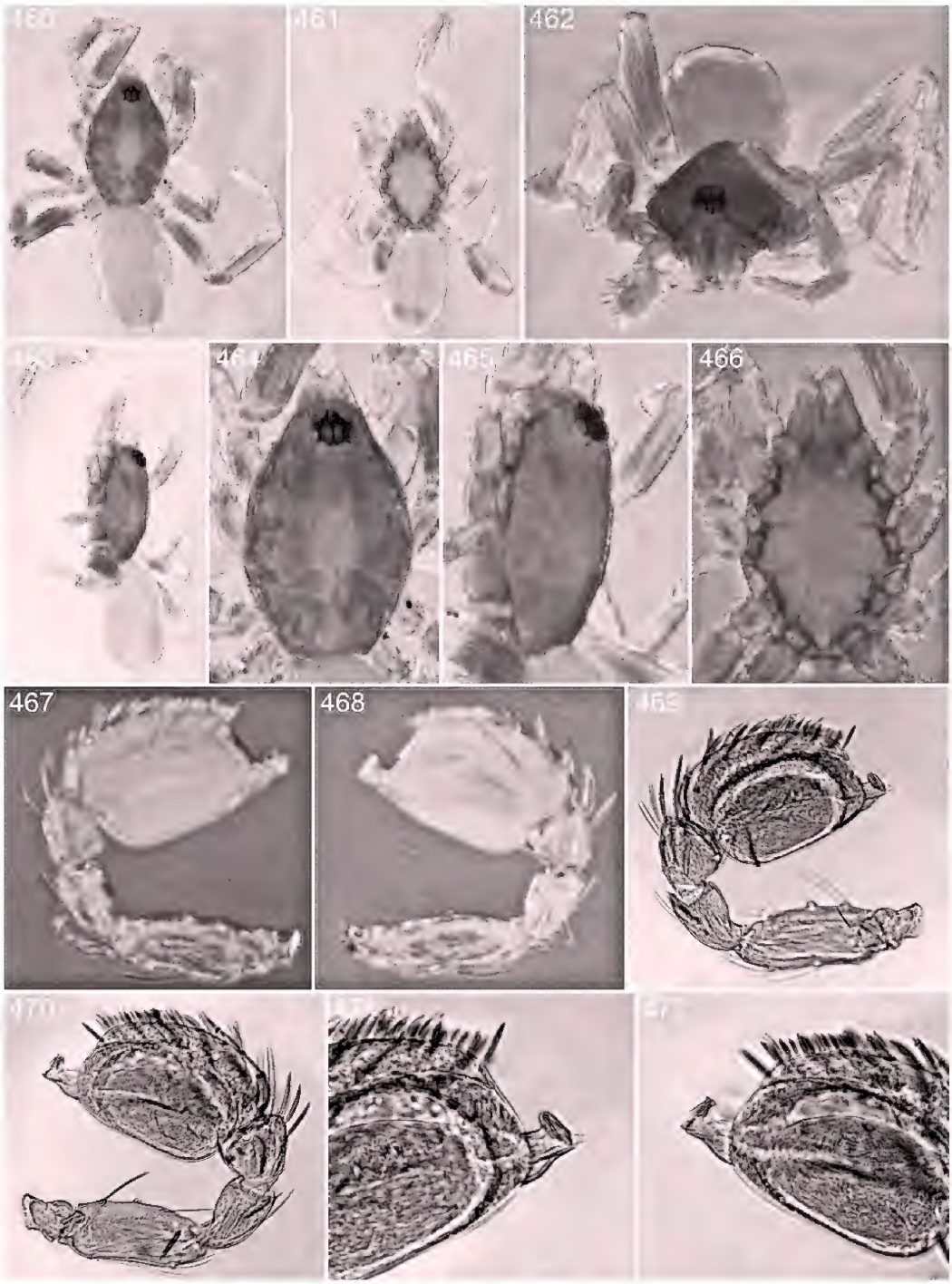
OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Netherlands Antilles (Saba Island)

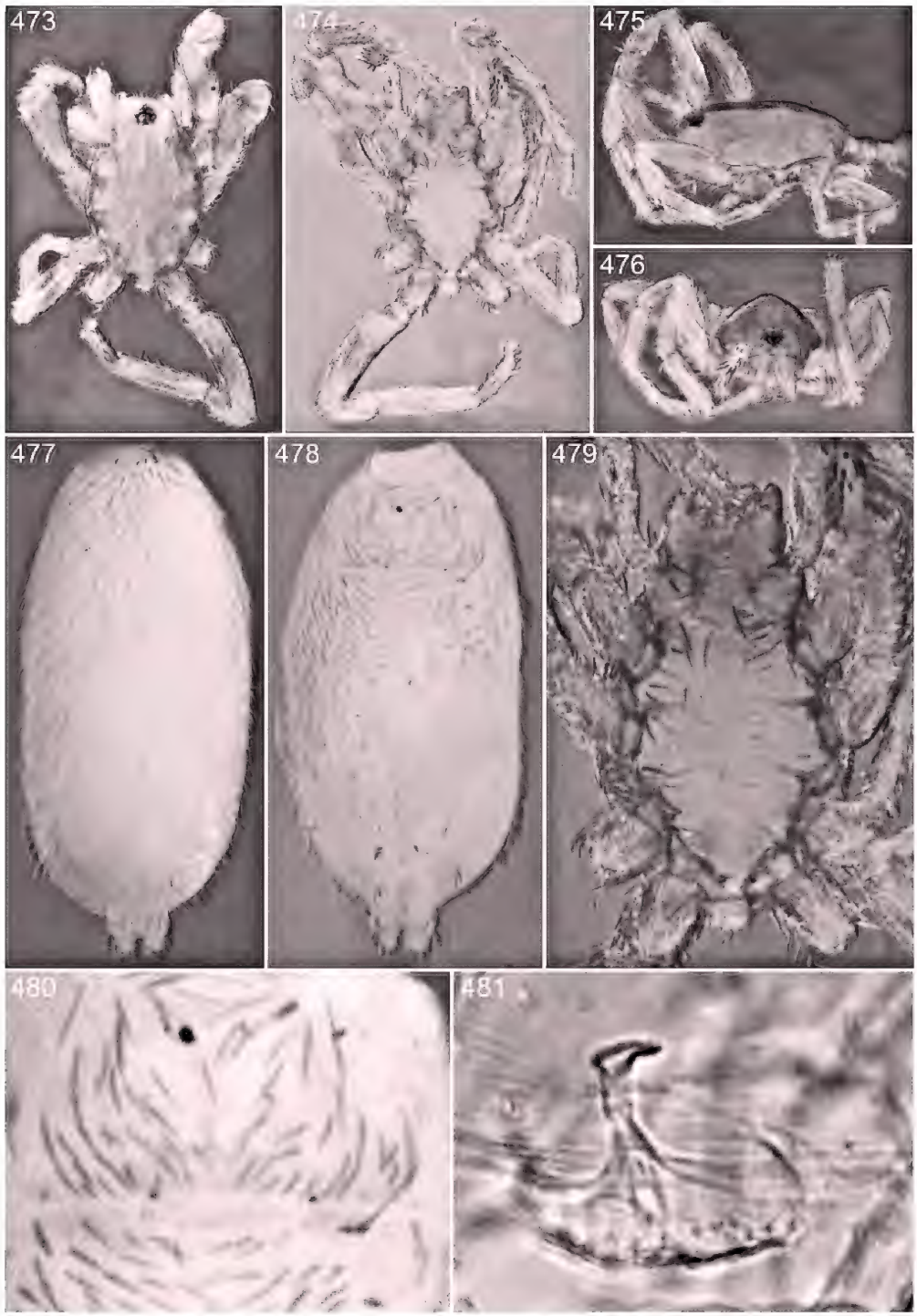
Stenoonops scabriculus Simon
Figures 505–531

Stenoonops scabriculus Simon, 1891: 565 (two male syntypes from St. Vincent, in BMNH; examined). – Chickering, 1969: 18, figs. 47, 48.

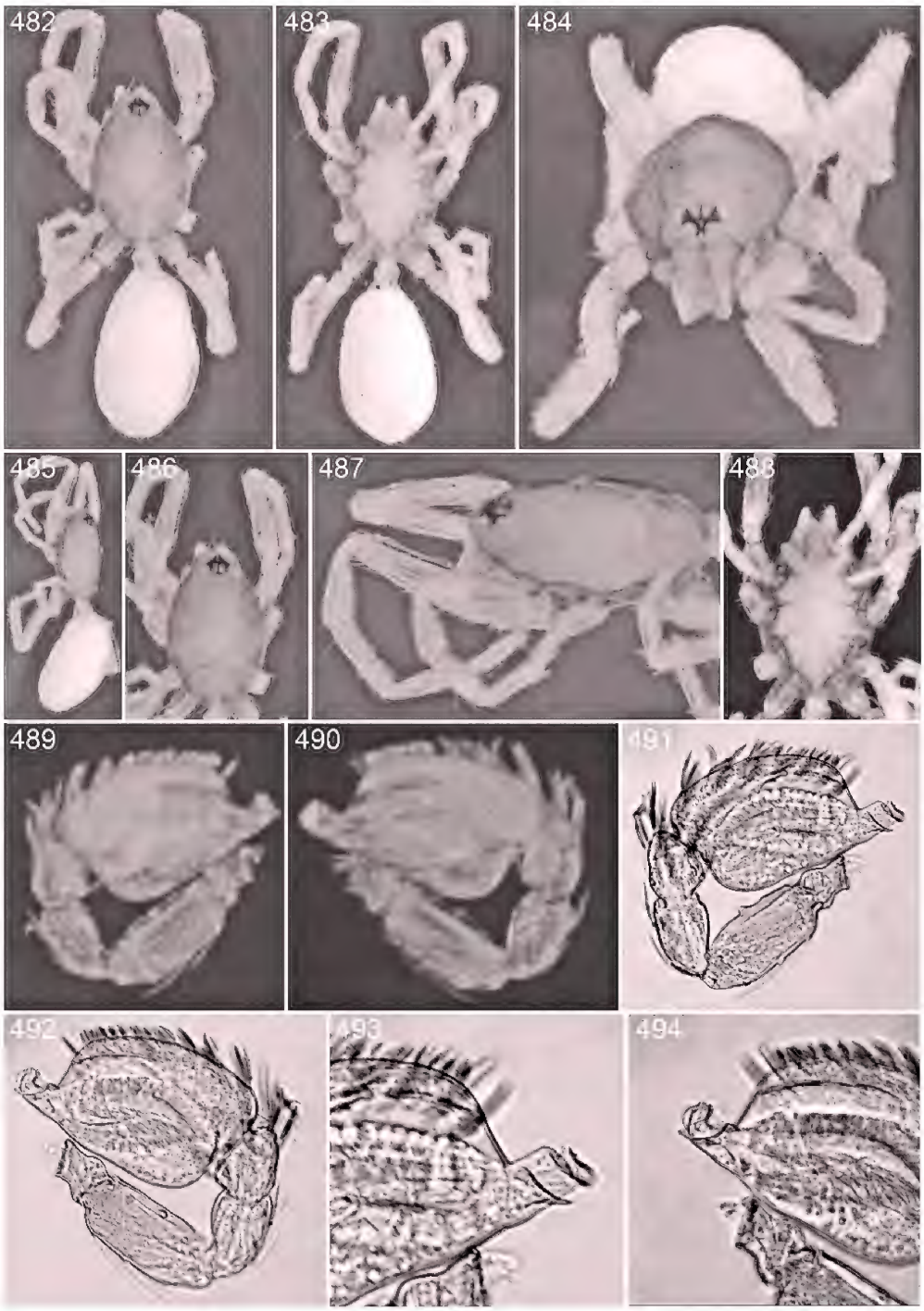
DIAGNOSIS: Males and females have not been collected together, but we have found no characters suggesting that the Guadeloupe



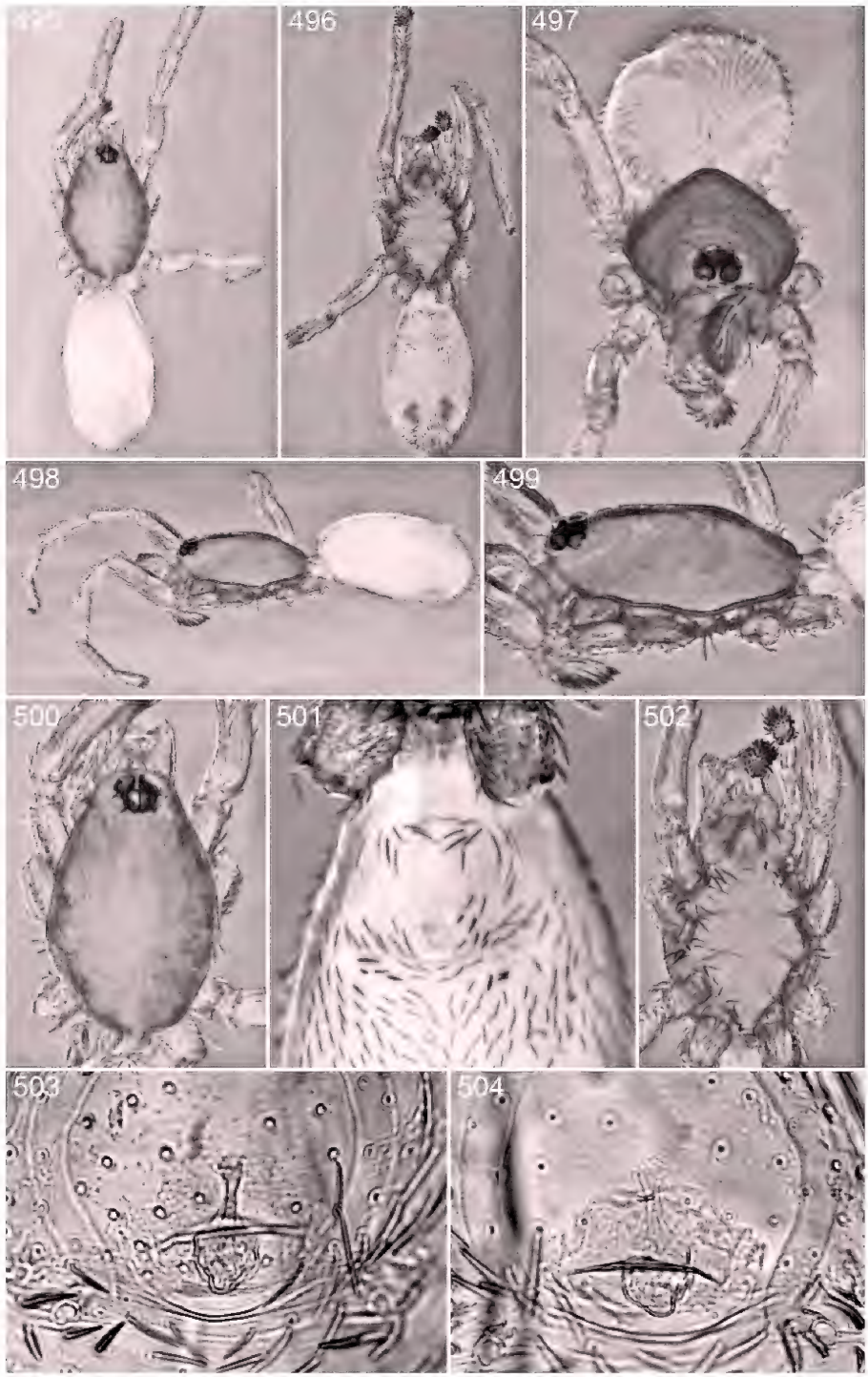
Figs. 460–472. *Stenoonops tortola*, new species, male. **460.** Habitus, dorsal view. **461.** Same, ventral view. **462.** Same, anterior view. **463.** Same, lateral view. **464.** Carapace, dorsal view. **465.** Same, lateral view. **466.** Sternum, ventral view. **467.** Left palp, prolateral view (stereoscope). **468.** Same, retrolateral view. **469.** Same, prolateral view (compound microscope). **470.** Same, retrolateral view. **471.** Embolus, prolateral view. **472.** Same, retrolateral view.



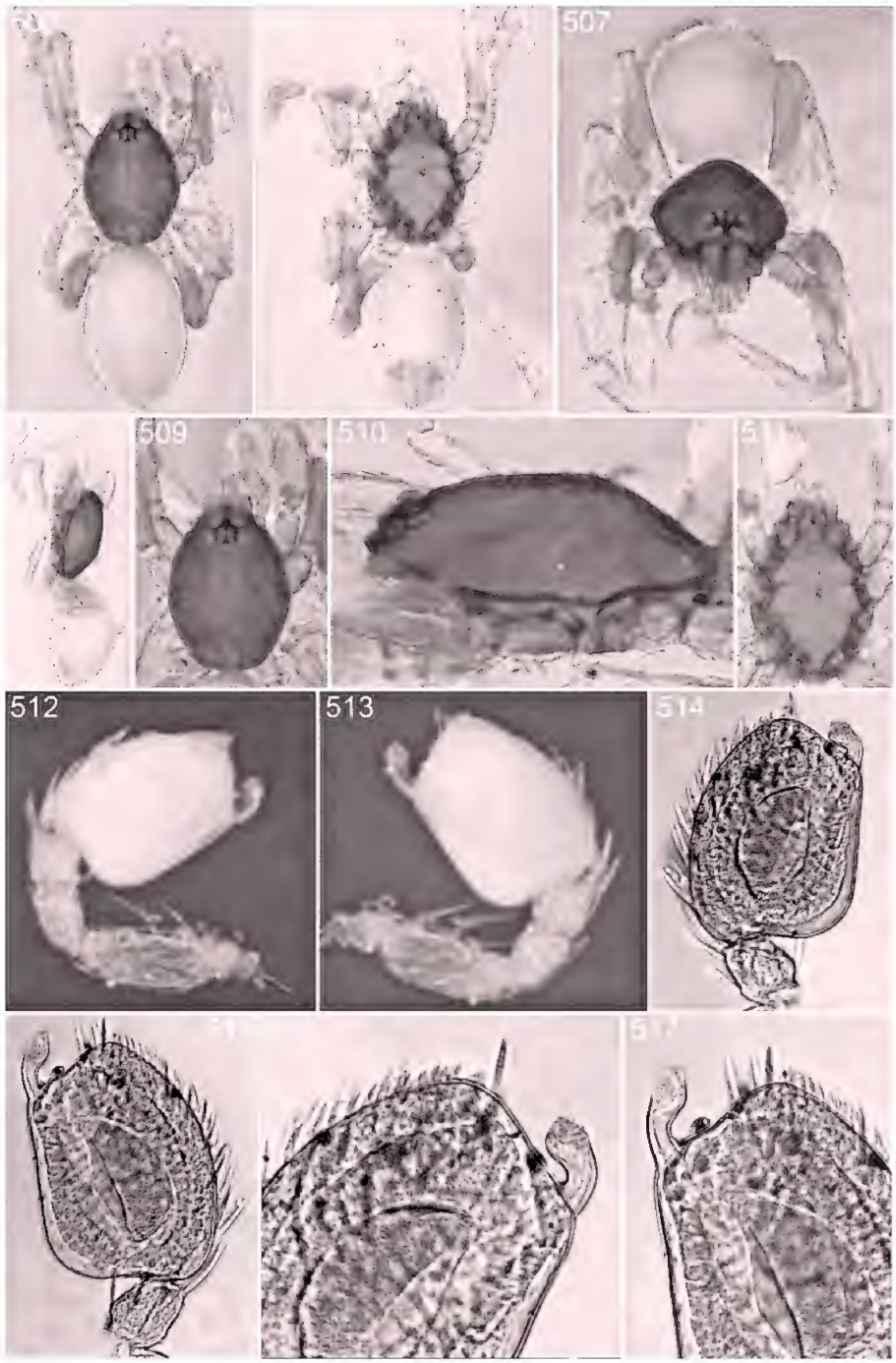
Figs. 473–481. *Stenoonops tortola*, new species, female. **473.** Carapace, dorsal view. **474.** Same, ventral view. **475.** Same, lateral view. **476.** Same, anterior view. **477.** Abdomen, dorsal view. **478.** Same, ventral view. **479.** Sternum, ventral view. **480.** Epigastric area, ventral view. **481.** Genitalia, dorsal view.



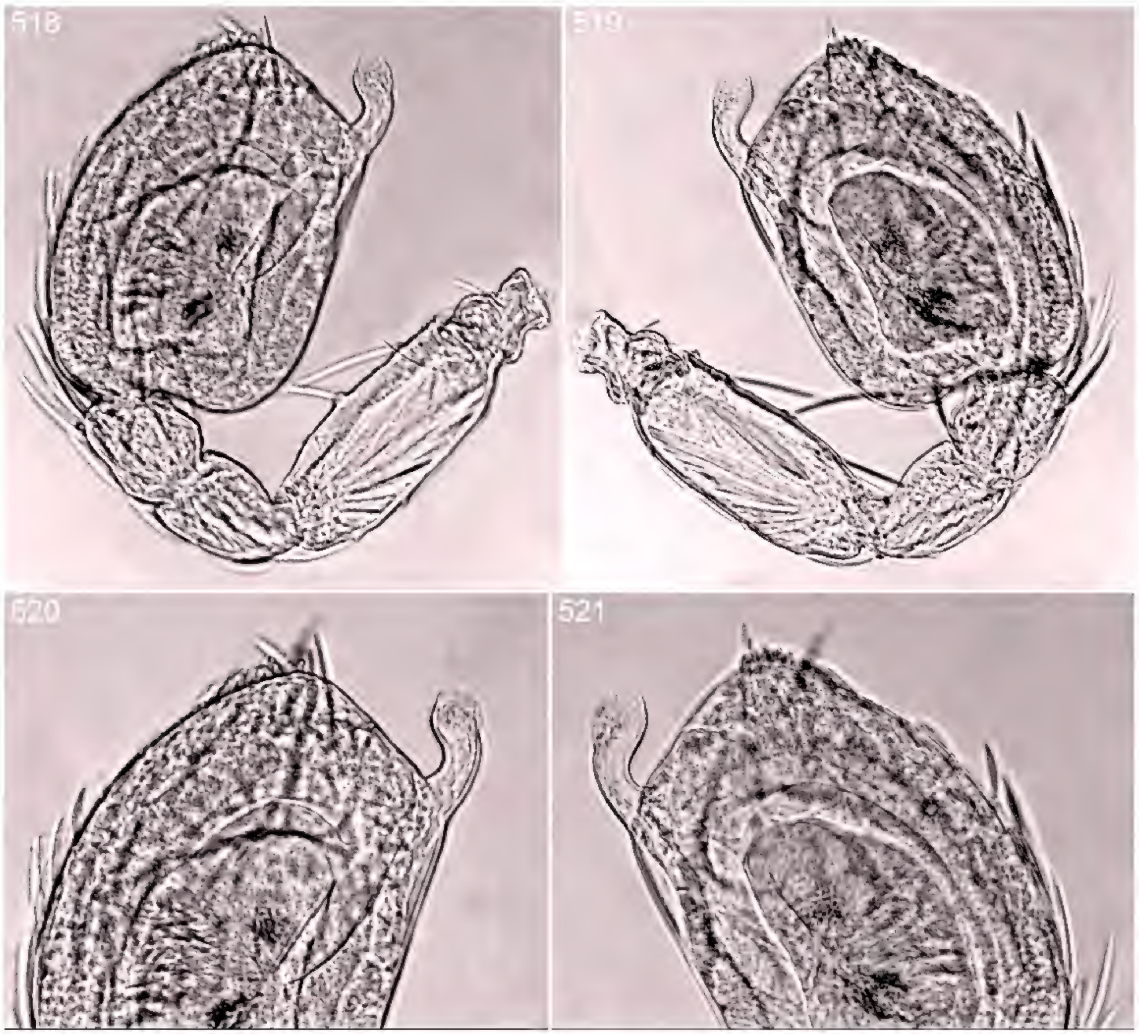
Figs. 482–494. *Stenoonops exgord*, new species, male. **482.** Habitus, dorsal view. **483.** Same, ventral view. **484.** Same, anterior view. **485.** Same, lateral view. **486.** Carapace, dorsal view. **487.** Same, lateral view. **488.** Sternum, ventral view. **489.** Left palp, prolateral view (stereoscope). **490.** Same, retrolateral view. **491.** Same, prolateral view (compound microscope). **492.** Same, retrolateral view. **493.** Embolus, prolateral view. **494.** Same, retrolateral view.



Figs. 495–504. *Stenoonops saba*, new species, female. **495.** Habitus, dorsal view. **496.** Same, ventral view. **497.** Same, anterior view. **498.** Same, lateral view. **499.** Carapace, lateral view. **500.** Same, dorsal view. **501.** Epigastric area, ventral view. **502.** Sternum, ventral view. **503.** Genitalia, ventral view. **504.** Same, dorsal view.



Figs. 505–517. *Stenoonops scabriculus* Simon, male syntype from St. Vincent (except 512, 513, male from Venezuela). **505.** Habitus, dorsal view. **506.** Same, ventral view. **507.** Same, anterior view. **508.** Same, lateral view. **509.** Carapace, dorsal view. **510.** Same, lateral view. **511.** Sternum, ventral view. **512.** Left palp, prolateral view (stereoscope). **513.** Same, retrolateral view. **514.** Same, prolateral view (compound microscope). **515.** Same, retrolateral view. **516.** Embolus, prolateral view. **517.** Same, retrolateral view.



Figs. 518–521. *Stenoonops scabriculus* Simon, male from Venezuela. **518.** Left palp, prolateral view. **519.** Same, retrolateral view. **520.** Embolus, prolateral view. **521.** Same, retrolateral view.

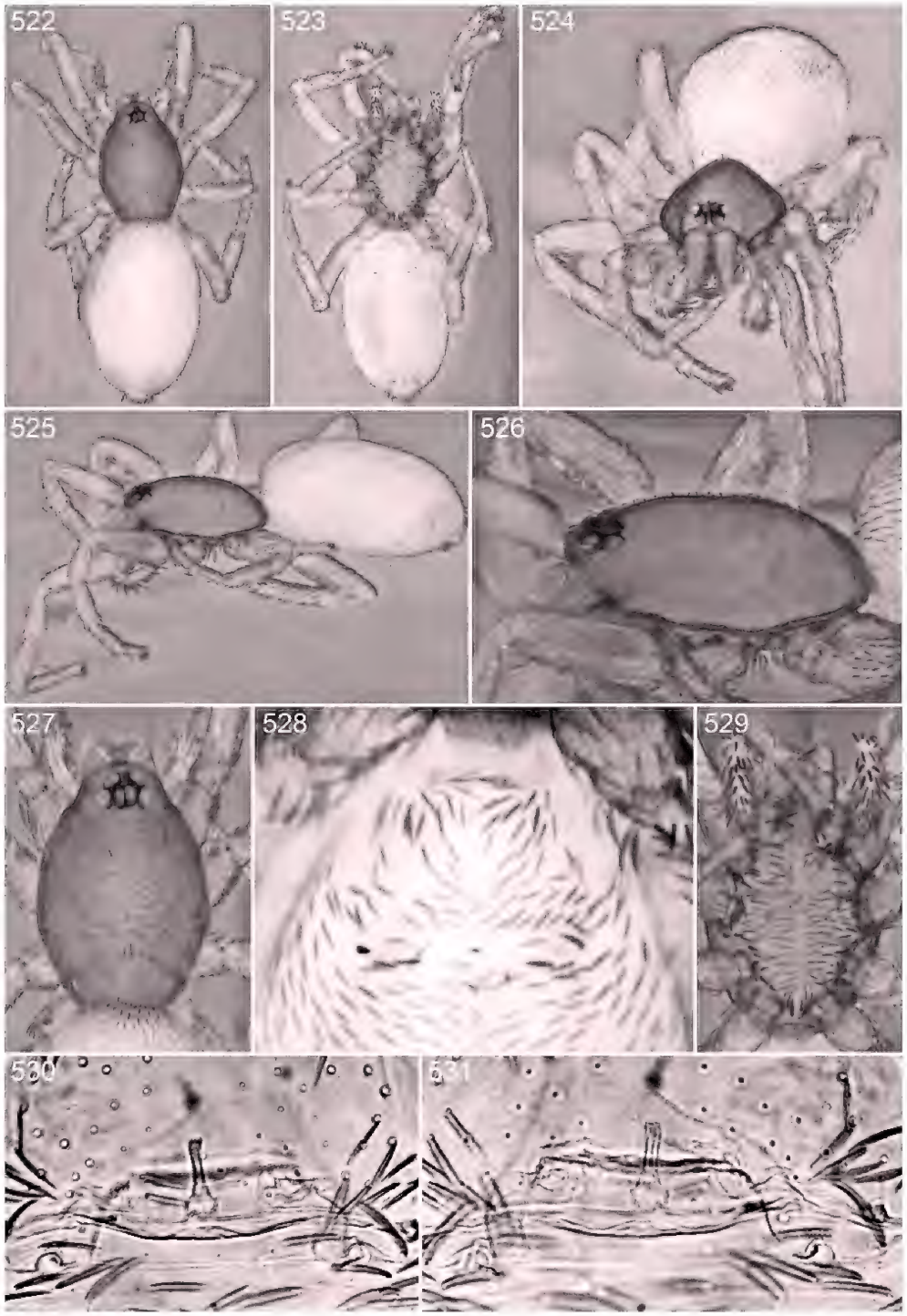
female is not conspecific with the males from St. Vincent and the Venezuelan mainland. Males can be recognized by the relatively short, stubby embolus, the distal half of which is curved dorsally (figs. 514–517), females by the basally expanded anterior genitalic projection and rectangular anterior genitalic margins (figs. 530, 531).

MALE (PBI_OON 40816, figs. 505–521): Total length 1.51. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with long, oblique, longitudinal ridge. Embolus short, bent dorsally at about half its length (figs. 514–517).

FEMALE (PBI_OON 27522, figs. 522–531): Total length 1.77. Anterior genitalic projection twice as wide posteriorly as anteriorly (figs. 530, 531).

MATERIAL EXAMINED: GUADELOUPE: Porte d'Enfer, June 3, 1978 (MNHN PBI_OON 27522), 1♀. ST. VINCENT: no specific locality (BMNH PBI_OON 40816), 2♂ (syntypes). VENEZUELA: **Carabobo:** San Esteban (E. Simon, MNHN 5623, PBI_OON 4474), 1♂.

VARIATION: We have detected no significant genitalic differences in the male from Venezuela (figs. 512, 513, 518–521) that was assigned to this species by Simon.



Figs. 522–531. *Stenoonops scabriculus* Simon, female. **522.** Habitus, dorsal view. **523.** Same, ventral view. **524.** Same, anterior view. **525.** Same, lateral view. **526.** Carapace, lateral view. **527.** Same, dorsal view. **528.** Epigastric area, ventral view. **529.** Sternum, ventral view. **530.** Genitalia, ventral view. **531.** Same, dorsal view.

DISTRIBUTION: Lesser Antilles (Guadeloupe, St. Vincent) and northern Venezuela.

Stenoonops simla, new species
Figures 532–554

TYPE: Male holotype from Trinidad, but without specific locality or date (N. Weber), deposited in MCZ (72093, PBI_OON 26443).

ETYMOLOGY: The specific name is a noun in apposition taken from one of the localities.

DIAGNOSIS: Males can be recognized by the enlarged palpal bulb bearing a very short embolus (figs. 539–544), females (which may be mismatched with the male holotype) by the medially widened anterior genitalic projection (figs. 553, 554).

MALE (PBI_OON 26443, figs. 532–544): Total length 2.09. Elevated portion of pars cephalica finely reticulate; posterior eye row straight from above, procurved from front. Endites with anterior third wider than median third. Embolus short, situated at tip of enlarged bulb (figs. 539–544).

FEMALE (PBI_OON 26446, figs. 545–554): Total length 1.33. Anterior genitalic projection widest at middle of its length (figs. 553, 554).

OTHER MATERIAL EXAMINED: TRINIDAD: road to Blanchisseuse, 4–13 mi N Simla, Apr. 22, 1964 (A. Chickering, MCZ 72094, PBI_OON 26446), 1♀.

DISTRIBUTION: Trinidad.

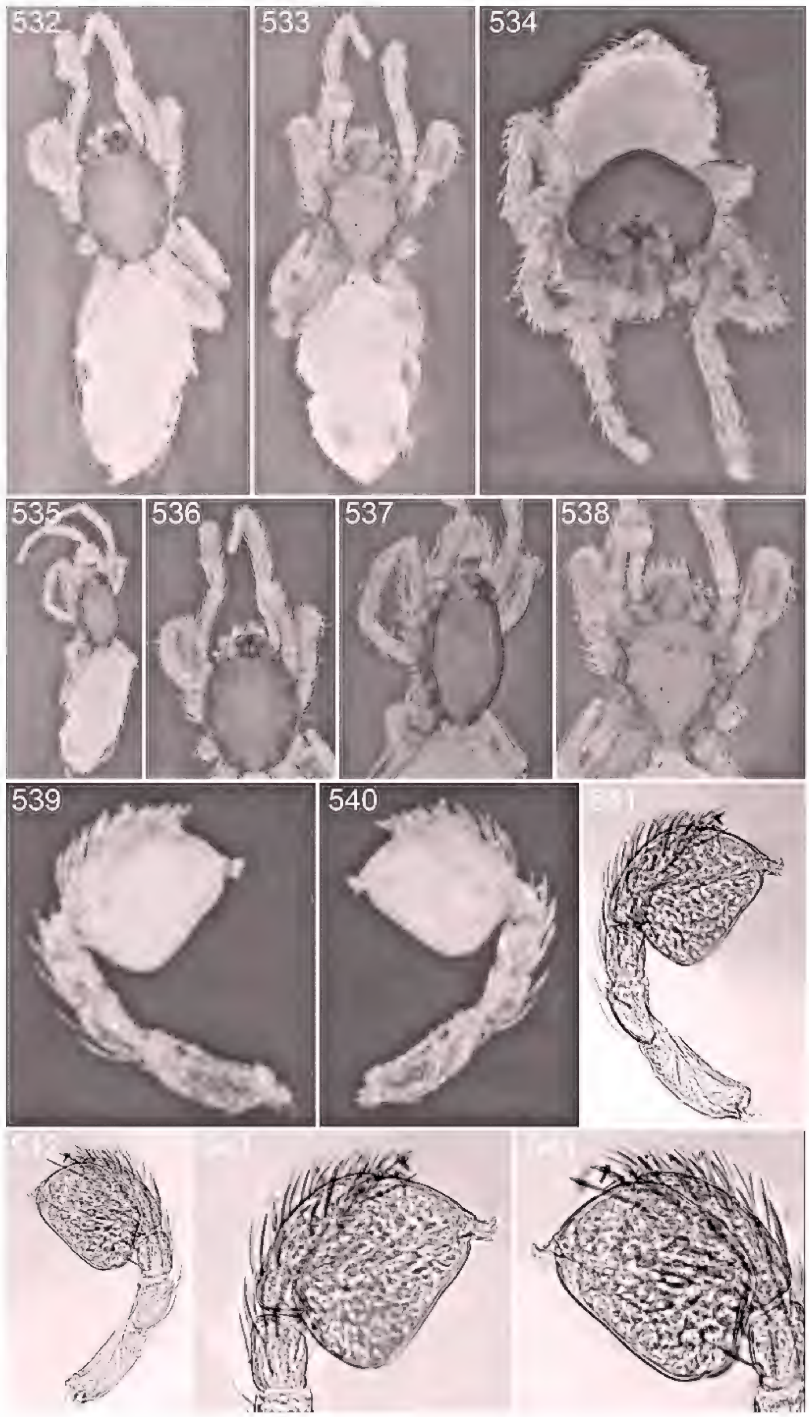
Longoonops, new genus

TYPE SPECIES: *Longoonops bicolor*, new species.

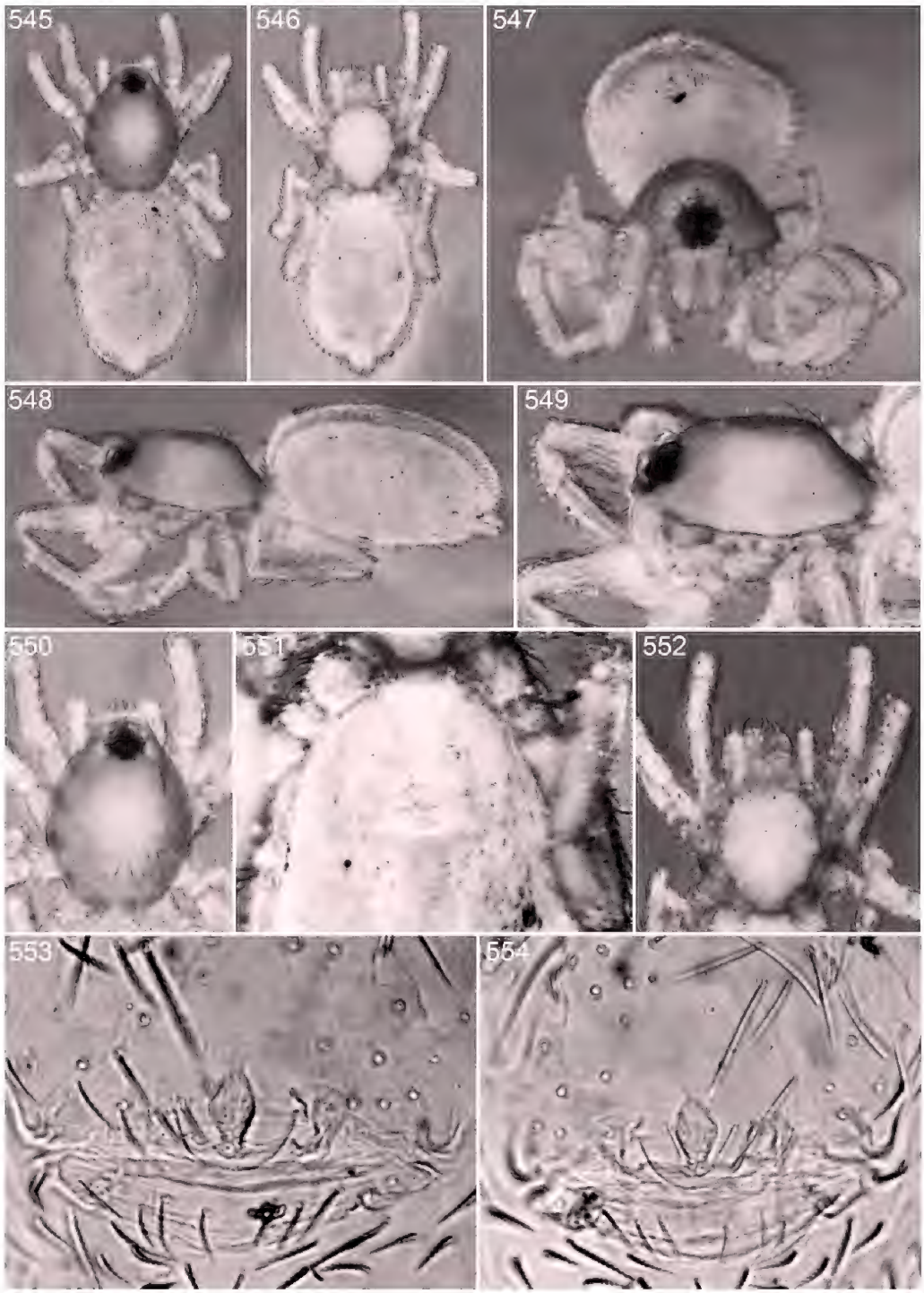
ETYMOLOGY: The generic name is an arbitrary combination of letters, masculine in gender.

DIAGNOSIS: Members of this genus resemble those of *Stenoonops*, although they lack the distinct furrows separating the sternal extensions (figs. 584, 618) that are here considered synapomorphic for that genus. In *Longoonops* species, the posterior median eyes are distinctively elongated, and are longer than the posterior lateral eyes (figs. 559, 605). Some *Longoonops* species have color patterns on the abdomen and legs that are also not found in *Stenoonops*.

DESCRIPTION: Total length of males 1.2–1.7, of females 1.4–1.6; cephalothorax pale orange, legs and palpi yellow (some leg segments sometimes darkened), abdomen white (sometimes with dorsal dark markings). CEPHALOTHORAX: Carapace without any pattern, elongate oval in dorsal view, pars cephalica flat in lateral view, anteriorly narrowed to 0.49 times its maximum width or less, with rounded posterolateral corners; posterolateral edge without pits, posterior margin not bulging below posterior rim, anterolateral corners without extension or projections, posterolateral surface without spikes, surface of elevated portion of pars cephalica finely reticulate, sides finely reticulate (figs. 576–580, 610, 611, 662, 663, 680, 681); thorax without depressions, fovea absent, without radiating rows of pits; lateral margin straight, smooth, without denticles; plumose setae near posterior margin of pars thoracica absent; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae absent. Clypeus margin unmodified, straight in front view, sloping forward in lateral view, low, ALE separated from edge of carapace by less than their radius, median projection absent; setae dark, needlelike. Chilum absent. Eyes six, well developed, ALE largest, ALE oval, PME long, narrow, much longer than PLE, PLE circular; ALE separated by less than their radius, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius; posterior eye row straight from above, procurved from front. Sternum longer than wide, coloration uniform, fused to carapace, median concavity absent, without hair tufts or radial furrowlike grooves between coxae I–II, II–III, III–IV (figs. 618, 667), radial furrow opposite coxae III absent; surface with sides finely reticulate, without pits, microsculpture absent at middle (fig. 584, 685), sickle-shaped structures absent; anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension, anterior corners unmodified, lateral margin without infracoxal grooves, distance between coxae II and III greater than distance between coxae I and II, and coxae III and IV, extensions of precoxal triangles absent, lateral margins with three pairs of lateral projections,



Figs. 532–544. *Stenoonops simla*, new species, male. **532.** Habitus, dorsal view. **533.** Same, ventral view. **534.** Same, anterior view. **535.** Same, lateral view. **536.** Carapace, dorsal view. **537.** Same, lateral view. **538.** Sternum, ventral view. **539.** Left palp, prolateral view (stereoscope). **540.** Same, retrolateral view. **541.** Same, prolateral view (compound microscope). **542.** Same, retrolateral view. **543.** Embolus, prolateral view. **544.** Same, retrolateral view.



Figs. 545–554. *Stenoonops simla*, new species, female. **545.** Habitus, dorsal view. **546.** Same, ventral view. **547.** Same, anterior view. **548.** Same, lateral view. **549.** Carapace, lateral view. **550.** Same, dorsal view. **551.** Epigastric area, ventral view. **552.** Sternum, ventral view. **553.** Genitalia, ventral view. **554.** Same, dorsal view.

with posterior hump; setae sparse, dark, spatulate, in group at base of coxae, originating from surface. Chelicerae straight, anterior face unmodified; without teeth on promargin and retromargin; fang without toothlike projections, directed posteriorly; shape normal, without prominent basal process, tip unmodified; setae dark, spatulate, densest medially; paturon inner margin with pairs of smooth, distally enlarged setae (figs. 581, 612, 664, 682), distal region abruptly narrowed, posterior surface unmodified, promargin with row of flattened setae, laminate groove absent. Labium rectangular, not fused to sternum, anterior margin indented at middle, same as sternum in sclerotization, with six or more setae on anterior margin, subdistal portion with unmodified setae (figs. 586, 665). Endites distally not excavated, same as sternum in sclerotization, usually with anterior modifications in males (fig. 666); females with endites unmodified, with serrula in single row (figs. 613, 614, 683, 684); at least two scanned species with anteromedian margin bearing row of flattened setae with tined tips (fig. 587). Female palp without claw or spines; patella without prolateral row of ridges; tarsus with thickened setae, dorsal surface of tarsus with distal patch of shortened setae (figs. 615–617), those setae greatly reduced in number in *L. padiscus* (figs. 687–689). ABDOMEN: Cylindrical, without long posterior extension, rounded posteriorly, interscutal membrane without rows of small sclerotized platelets. Supposed book lung covers large, ovoid, without setae, anterolateral edge unmodified. Posterior spiracles connected by groove. Pedicel tube short, unmodified, scuto-pedicel region unmodified, scutum not extending far dorsal of pedicel, plumose hairs absent, matted setae on anterior ventral abdomen in pedicel area absent, cuticular outgrowths near pedicel absent. Dorsal scutum absent. Epigastric scutum weakly sclerotized, not surrounding pedicel, not protruding, small lateral sclerites absent, without anterolateral joints in females. Postepigastric scutum weakly sclerotized, short, only around epigastric furrow, not fused to epigastric scutum, anterior margin unmodified, without posteriorly directed lateral apodemes. Spinneret scutum absent; supraanal scutum absent. Dorsum setae dark, needlelike; epigastric area frontal setae thickened, dark, needlelike; postepigastric area setae dark, needlelike; dense patch of setae anterior to spinnerets absent. Colulus absent. Anterior lateral spinnerets with major ampulate gland spigot and one or two piriform gland spigots, posterior median and posterior lateral spinnerets each with single spigot (figs. 585, 668, 686). LEGS: Femur IV not thickened, same size as femora I–III, femora with transverse dorsal row of setae near distal end, but without obvious constriction at that point (figs. 592, 594, 595, 619, 620, 669), at least femur I with pore plates (fig. 593); patella plus tibia I shorter than carapace; tibia I unmodified, tibia IV specialized hairs on ventral apex absent, tibia IV ventral scopula absent; metatarsi I and II mesoapical comb absent, metatarsi III and IV weak ventral scopula absent. Leg spines absent, but anterior tibiae with widened ventral seta at distal tip (fig. 597). Lateral surfaces of superior claws with few large, basal teeth, median surfaces with numerous tiny, closely spaced, distal teeth (figs. 582, 583, 622, 690), inferior claw absent. Trichobothrial bases ovoid, with few ridges (figs. 596, 691); tarsal organ elongate (figs. 598, 599, 621, 623–625, 670, 671, 692, 693). GENITALIA: Male epigastric region with sperm pore not visible; furrow without Ω-shaped insertions, without setae. Male palp of normal size, not strongly sclerotized, right and left palps symmetrical, embolus light, without prolateral excavation; trochanter of normal size, unmodified; femur two or more times as long as trochanter, without posteriorly rounded lateral dilation, attaching to patella basally; patella shorter than femur, not enlarged, without prolateral row of ridges, setae unmodified; tibial trichobothria not examined; cymbium ovoid in dorsal view, fused with bulb but retaining seam (figs. 588–590, 672–674), not extending beyond distal tip of bulb, plumose setae absent, thickened setae present, with distal patch of shortened setae (fig. 591), reduced in number in *S. padiscus* (fig. 675); bulb 1–1.5 times as long as cymbium, stout, tapering apically; embolus short, basally thickened. Internal female genitalia reduced (except in *L. padiscus*).

DISTRIBUTION: Known only from Nicaragua, Costa Rica, Panama, Jamaica, and the Virgin Islands.

Key to Species of *Longoonops*

1. Legs without color pattern 2
– Proximal segments of anterior legs darkened 3
2. Embolar base relatively wide (figs. 711–716); female genitalia weakly sclerotized, reduced to simple, oval plate (figs. 725, 726); Virgin Islands . . . . . *L. gorda*
– Embolar base relatively narrow (figs. 656–661); female genitalia heavily sclerotized (figs. 702, 703); Jamaica . . . . . *L. padiscus*
3. Embolar base relatively wide (figs. 562–567); female genitalia weakly sclerotized, reduced to simple, oval plate (figs. 608, 609); Nicaragua and Costa Rica . . . . . *L. bicolor*
– Embolar base relatively narrow (figs. 633–638); female genitalia with short anterior projection (figs. 647, 648); Panama . . . . . *L. chickeringi*

Longoonops bicolor, new species
Figures 555–625

TYPES: Male holotype and female allotype taken in forest leaf litter at an elevation of 90 m at Cañas, Guanacaste, Costa Rica (Aug. 15, 1983; J., F. Murphy), deposited in AMNH (PBI_OON 36759).

ETYMOLOGY: The specific name refers to the color pattern on the anterior legs.

DIAGNOSIS: Both sexes usually have darkened femora, patellae, and tibiae on legs I and II (figs. 558, 603) and dark patches on the abdomen (figs. 555, 600); the embolus is short and wide (figs. 562–567) and the female genitalia are reduced, with a recurved anterior margin (figs. 608, 609).

MALE (PBI_OON 36759, figs. 555–599): Total length 1.64. Endites with oblique longitudinal ridge. Soft portions of abdominal dorsum with dark patches. Femora, patellae, and basal half of tibiae I, II darkened. Embolus wide, short, triangular, prolateral side of tip sharply bent (figs. 562–567).

FEMALE (PBI_OON 36759, figs. 600–625): Total length 1.57. Genitalia reduced, with recurved anterior margin and tiny anteromedian projection (figs. 608, 609).

OTHER MATERIAL EXAMINED: NICARAGUA: **Matagalpa:** approach to bridge over Río Bopal, Finca Alvares, Mun. San Dionicio, 12.7425°N, 85.82916°W, Dec. 1, 2007, Winkler, riparian forest, elev. 350 m (C. Víquez, J. Mata, AMNH PBI_OON 37025), 1♂. COSTA RICA: **Alajuela:** Montecristo, Upala, Apr. 13, 2007, litter (C. Víquez, AMNH PBI_OON 30996), 1♂, Jan. 10, 2008, Berlese (C. Víquez, AMNH PBI_OON 31118), 1♀, May 15, 2008, Berlese (C. Víquez, AMNH PBI_OON 31114–31117), 3♂, 1♀. **Guanacaste:** Cañas, Aug. 15, 1983, forest leaf litter, elev. 90 m (J., F. Murphy, AMNH PBI_OON 36759), 1♂, 2♀.

VARIATION: Despite the geographic separation, we have detected no significant genitalic differences among the males (figs. 568–575).

DISTRIBUTION: Nicaragua and Costa Rica.

Longoonops chickeringi, new species
Figures 626–648

TYPE: Male holotype from Summit Gardens, Canal Zone, Panamá, Panama (May 12, 1964; A. Chickering), deposited in MCZ (72921, PBI_OON 28129).

ETYMOLOGY: The specific name is a patronym in honor of the collector of the holotype, in recognition of his pioneering work on Central American and West Indian oonopids.

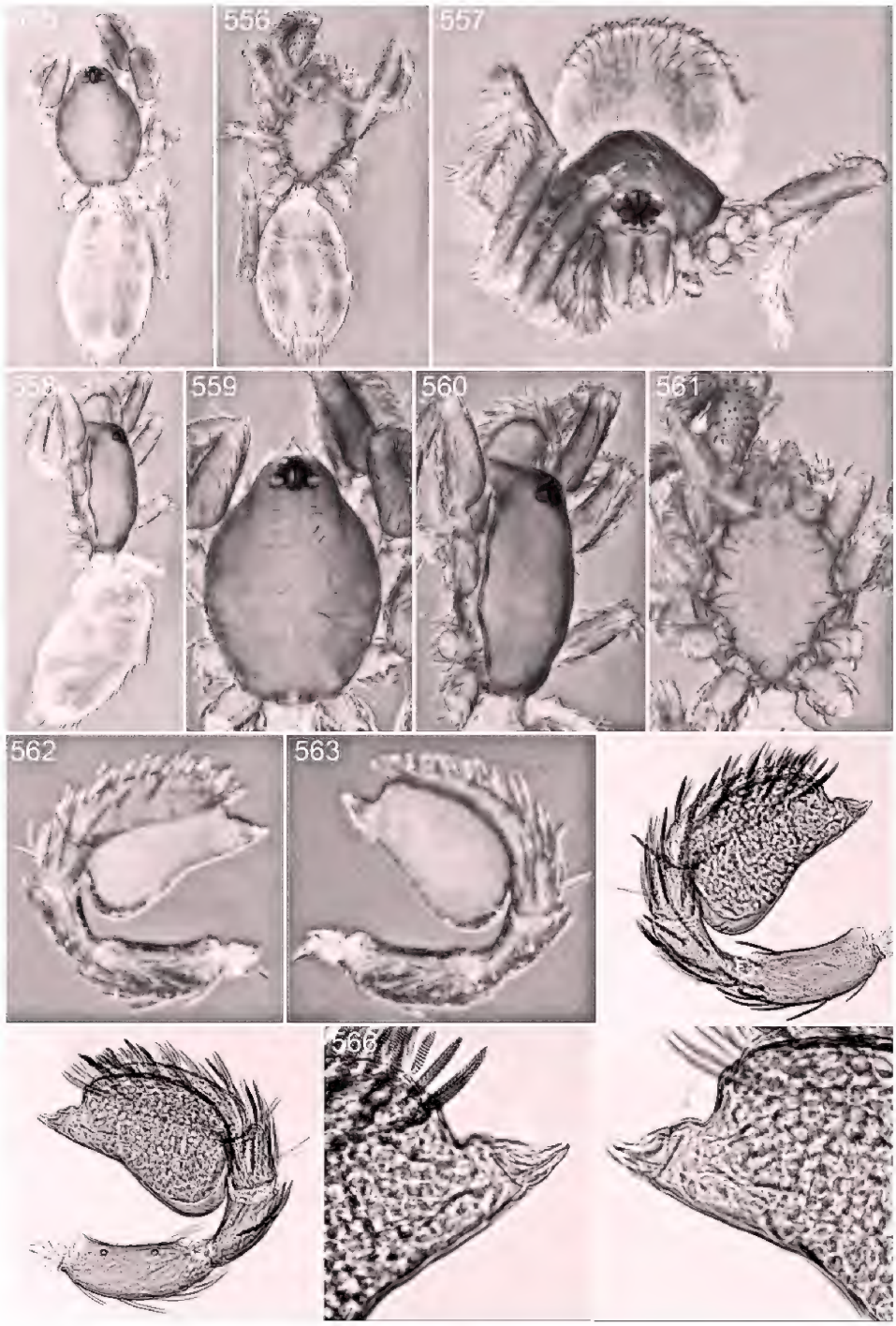
DIAGNOSIS: Males can be recognized by the short, rounded embolus (figs. 633–638), females by the procurved anterior genitalic margin, the sides of which extend anterior of the median anterior projection (figs. 647, 648).

MALE (PBI_OON 28129, figs. 626–638): Total length 1.64. Endites with slight protuberance at tip. Soft portions of abdominal dorsum with traces of dark patches. Femora I, II, patellae I, II, tibiae I, II, and proximal half of IV darkened. Embolus short, stubby, with rounded tip (figs. 633–638).

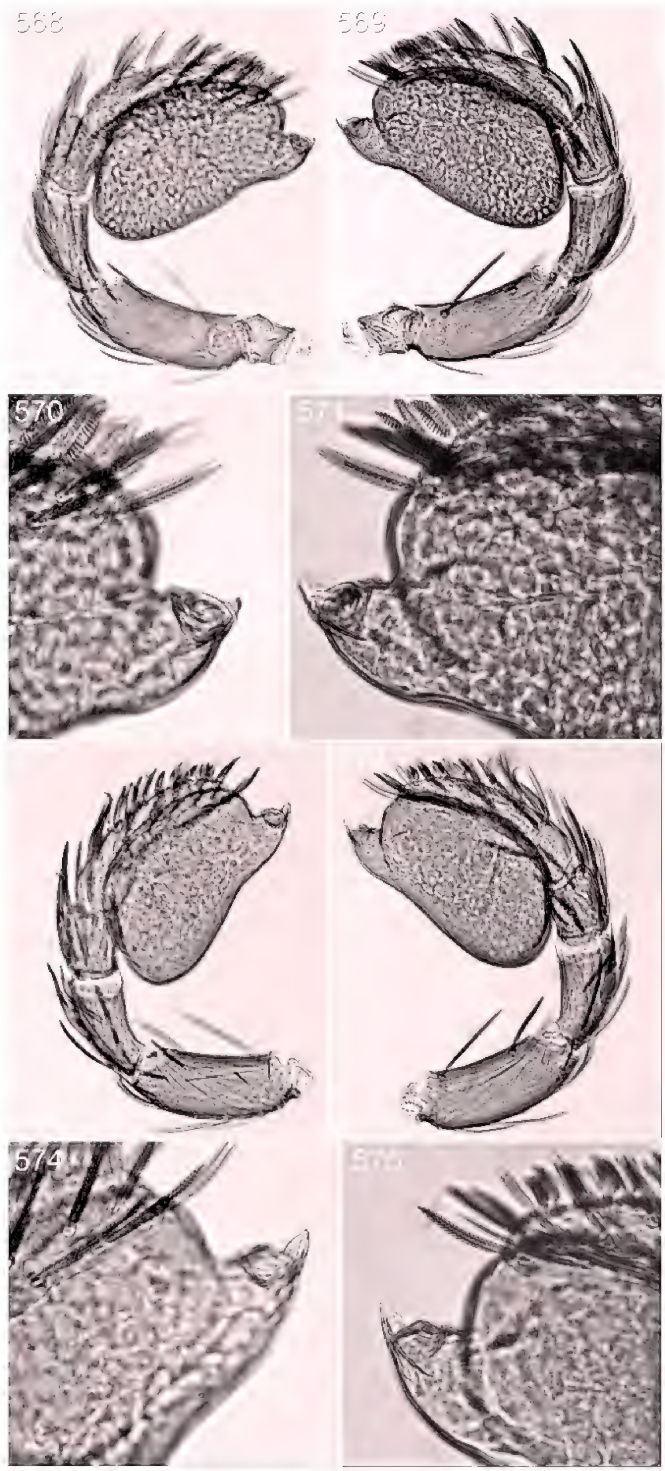
FEMALE (PBI_OON 26487, figs. 639–648): Total length 1.42. Anterior genitalic margin clearly procurved, with sides reaching further anteriorly than small median anterior projection (figs. 647, 648).

OTHER MATERIAL EXAMINED: PANAMA: **Panamá:** Canal Zone Forest Preserve, July 23, 1950 (A. Chickering, MCZ 72090, PBI_OON 26487), 1♀.

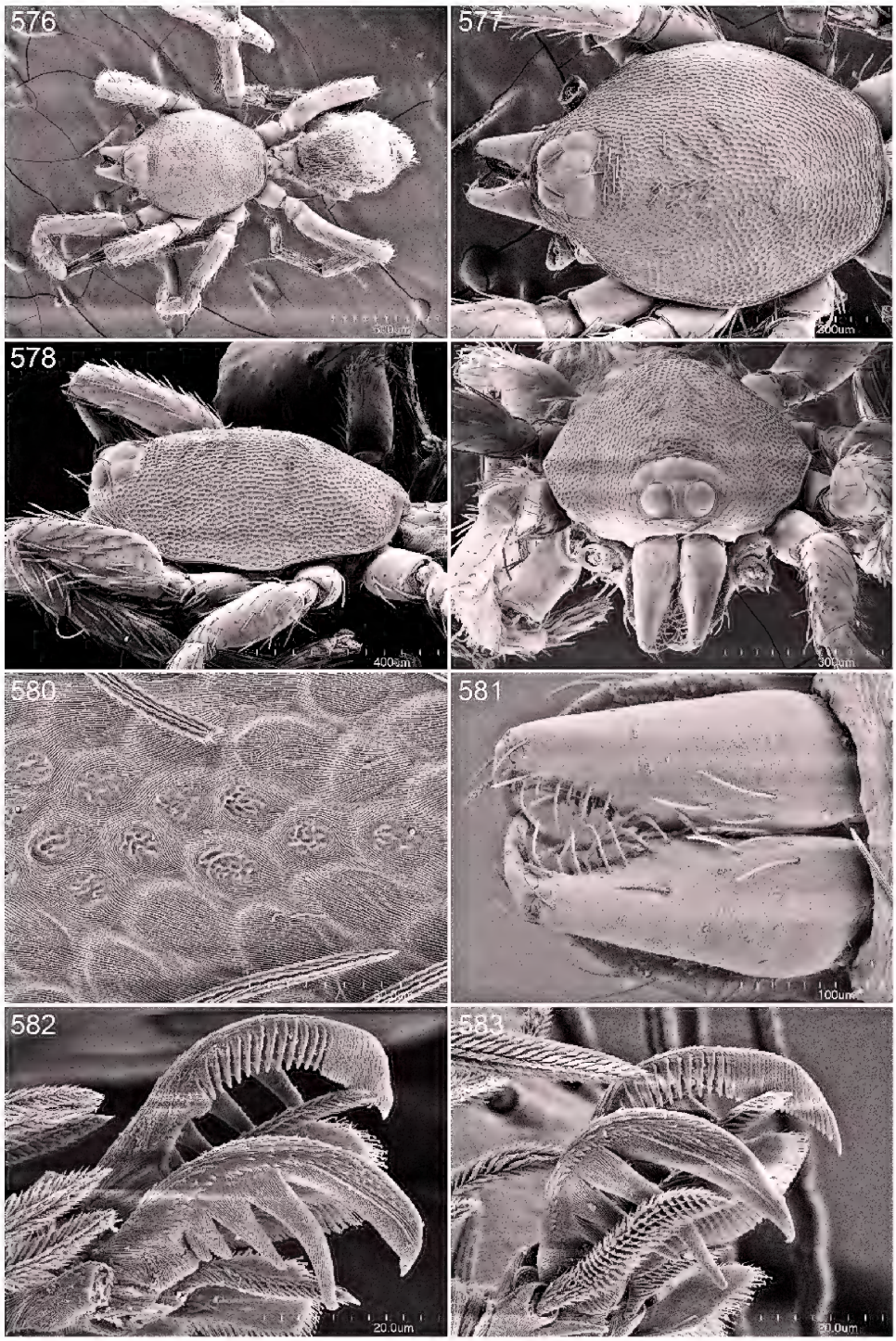
Distribution: Panama.



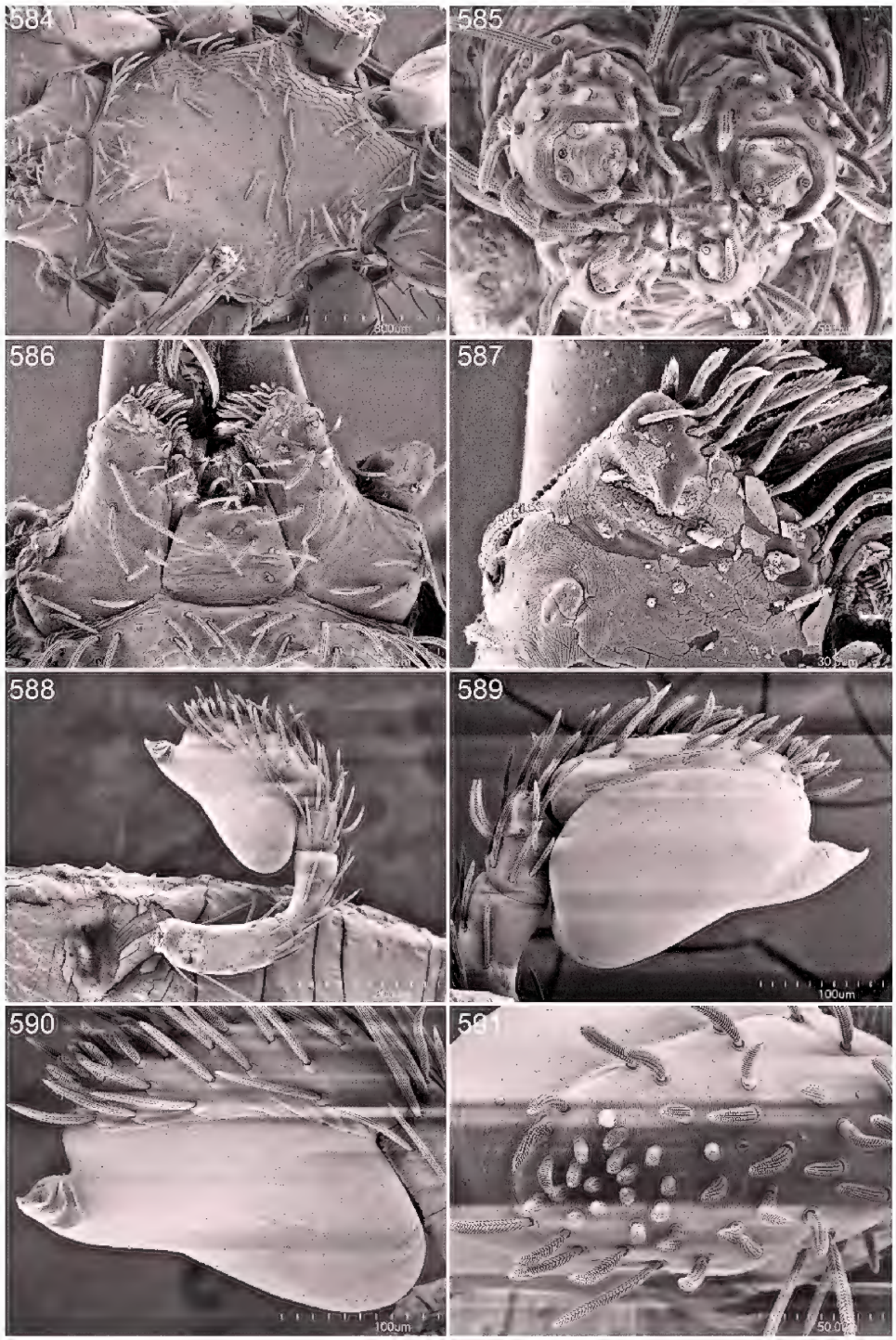
Figs. 555–567. *Longoonops bicolor*, new species, male. **555.** Habitus, dorsal view. **556.** Same, ventral view. **557.** Same, anterior view. **558.** Same, lateral view. **559.** Carapace, dorsal view. **560.** Same, lateral view. **561.** Sternum, ventral view. **562.** Left palp, prolateral view (stereoscope). **563.** Same, retrolateral view. **564.** Same, prolateral view (compound microscope). **565.** Same, retrolateral view. **566.** Embolus, prolateral view. **567.** Same, retrolateral view.



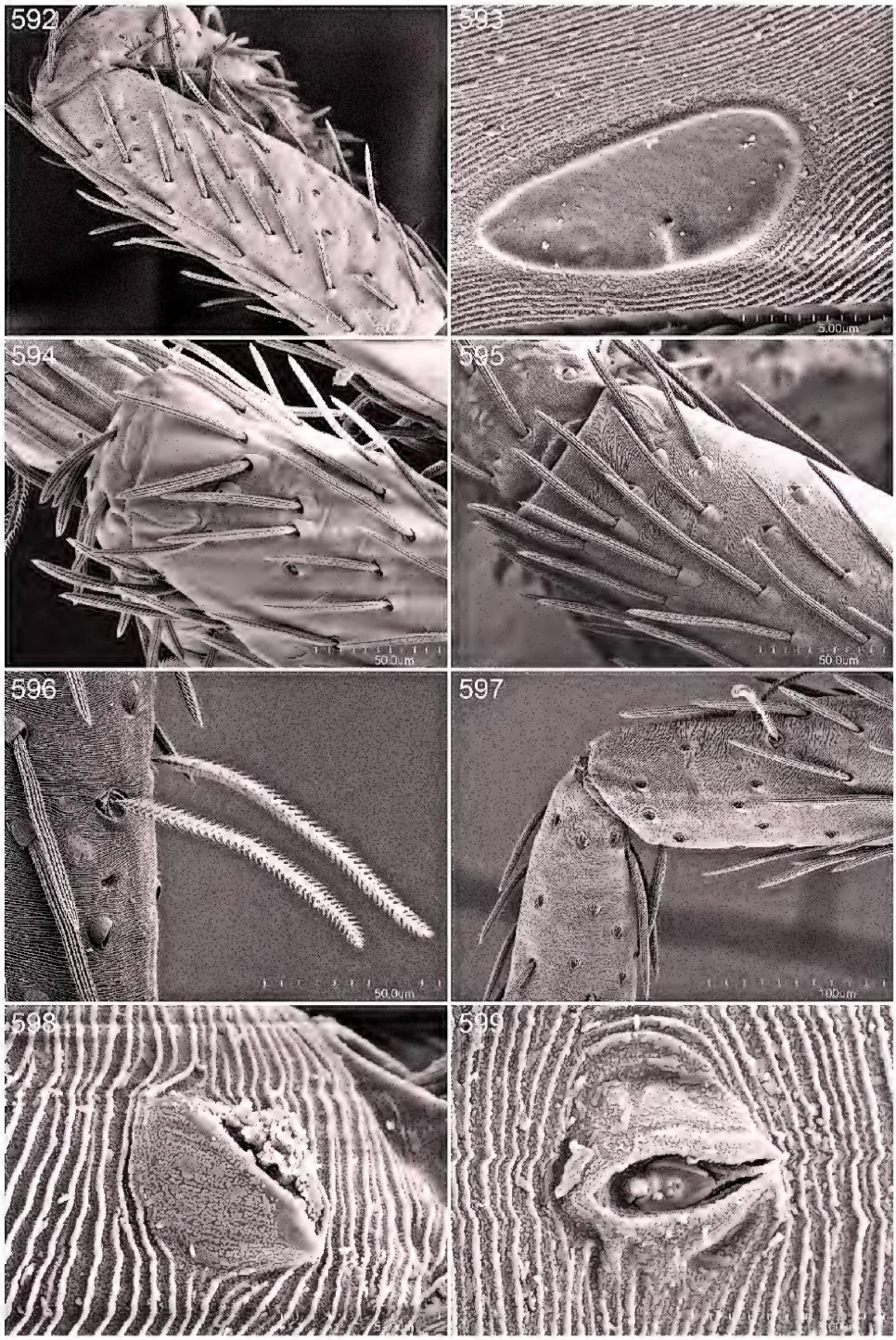
Figs. 568–575. *Longoonops bicolor*, new species. 568–571. Male from Nicaragua. 572–575. Male from Montecristo, Costa Rica. **568**, **572.** Left palp, prolateral view. **569**, **573.** Same, retrolateral view. **570**, **574.** Embolus, prolateral view. **571**, **575.** Same, retrolateral view.



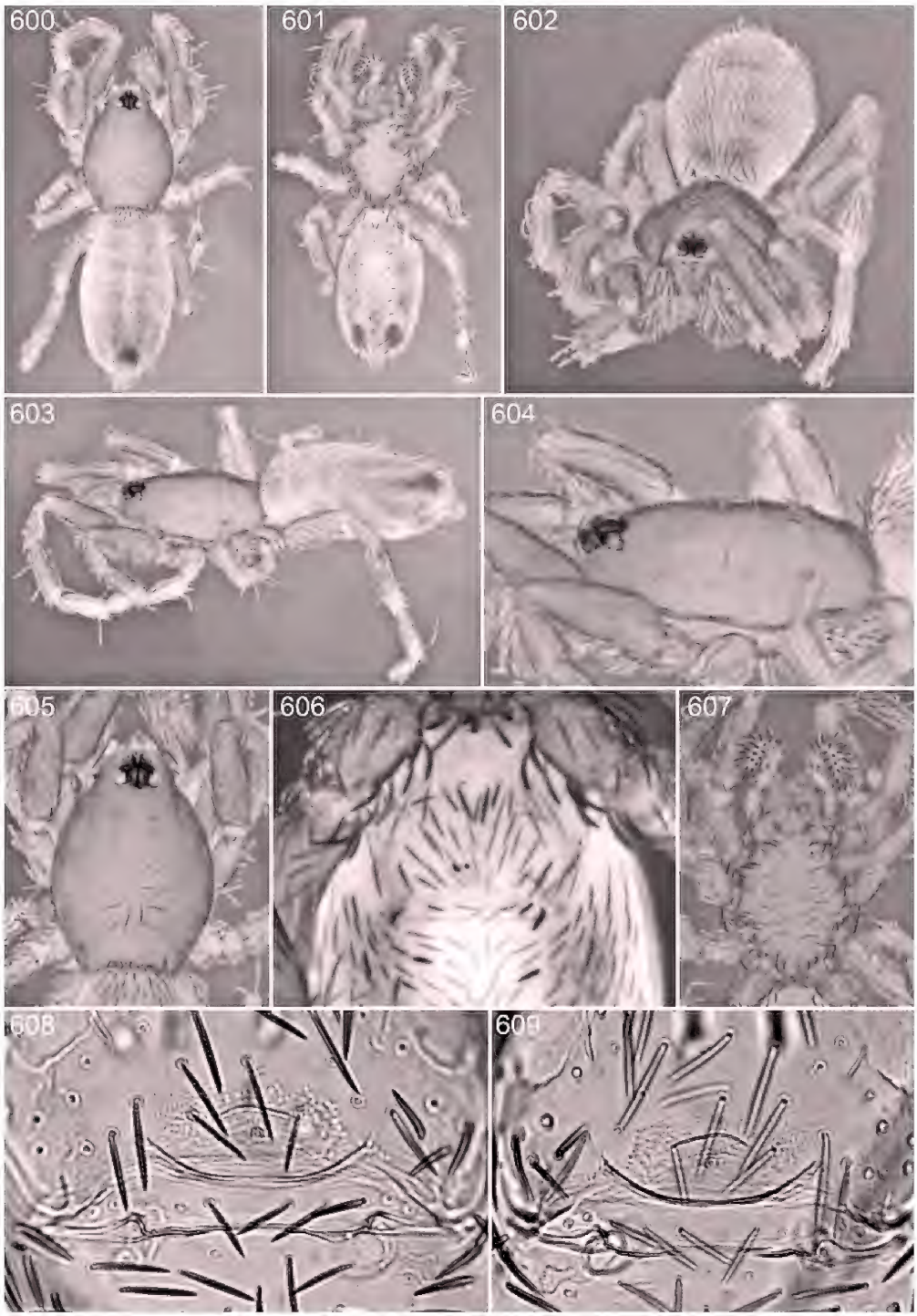
Figs. 576–583. *Longoonops bicolor*, new species, male. **576.** Habitus, dorsal view. **577.** Carapace, dorsal view. **578.** Same, lateral view. **579.** Same, anterior view. **580.** Carapace microsculpture, dorsal view. **581.** Chelicerae, anterior view. **582.** Claws of leg I, lateral view. **583.** Same, leg II.



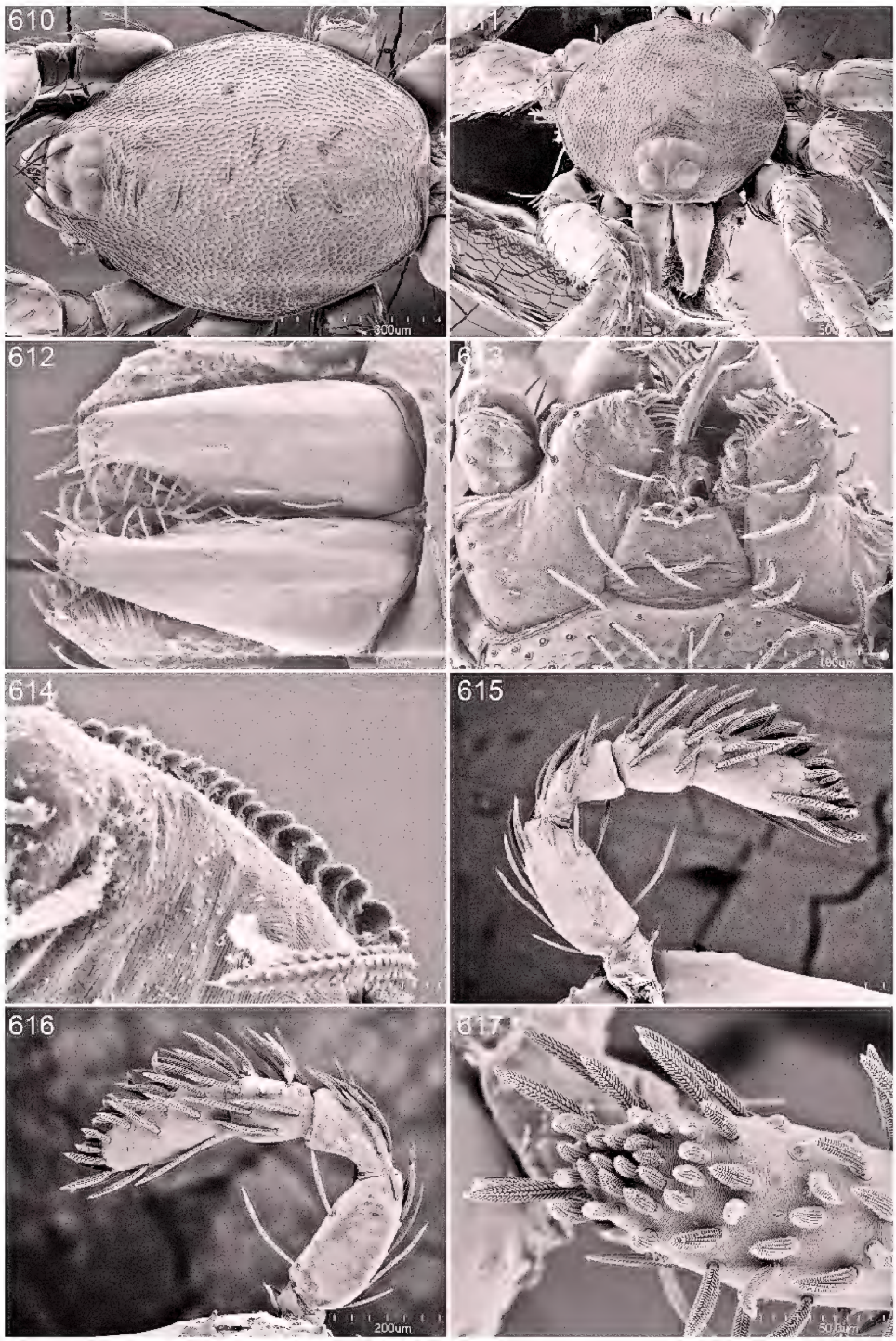
Figs. 584–591. *Longoonops bicolor*, new species, male. **584.** Sternum, ventral view. **585.** Spinnerets, apical view. **586.** Labium and endites, ventral view. **587.** Endite tip, ventral view. **588.** Left palp, retrolateral view. **589.** Left palpal bulb, prolateral view. **590.** Same, retrolateral view. **591.** Tip of cymbium, dorsal view.



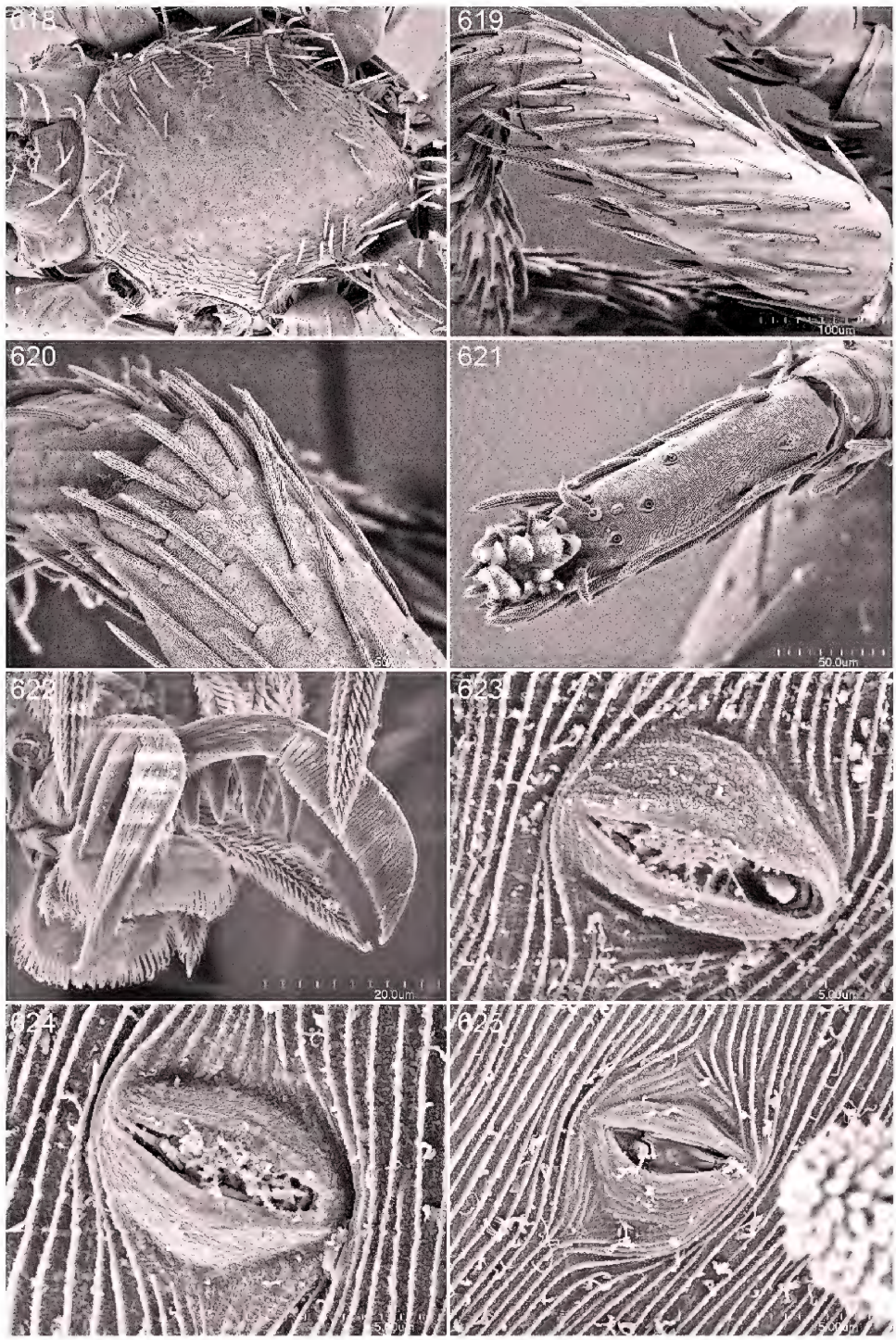
Figs. 592–599. *Longoonops bicolor*, new species, male. **592.** Femur I, dorsal view. **593.** Pore plate from femur I, dorsal view. **594.** Tip of femur II, dorsal view. **595.** Same, femur III. **596.** Trichobothria on tibia I, dorsal view. **597.** Tibia and metatarsus I, lateral view. **598.** Tarsal organ from leg II, dorsal view. **599.** Same, palp.



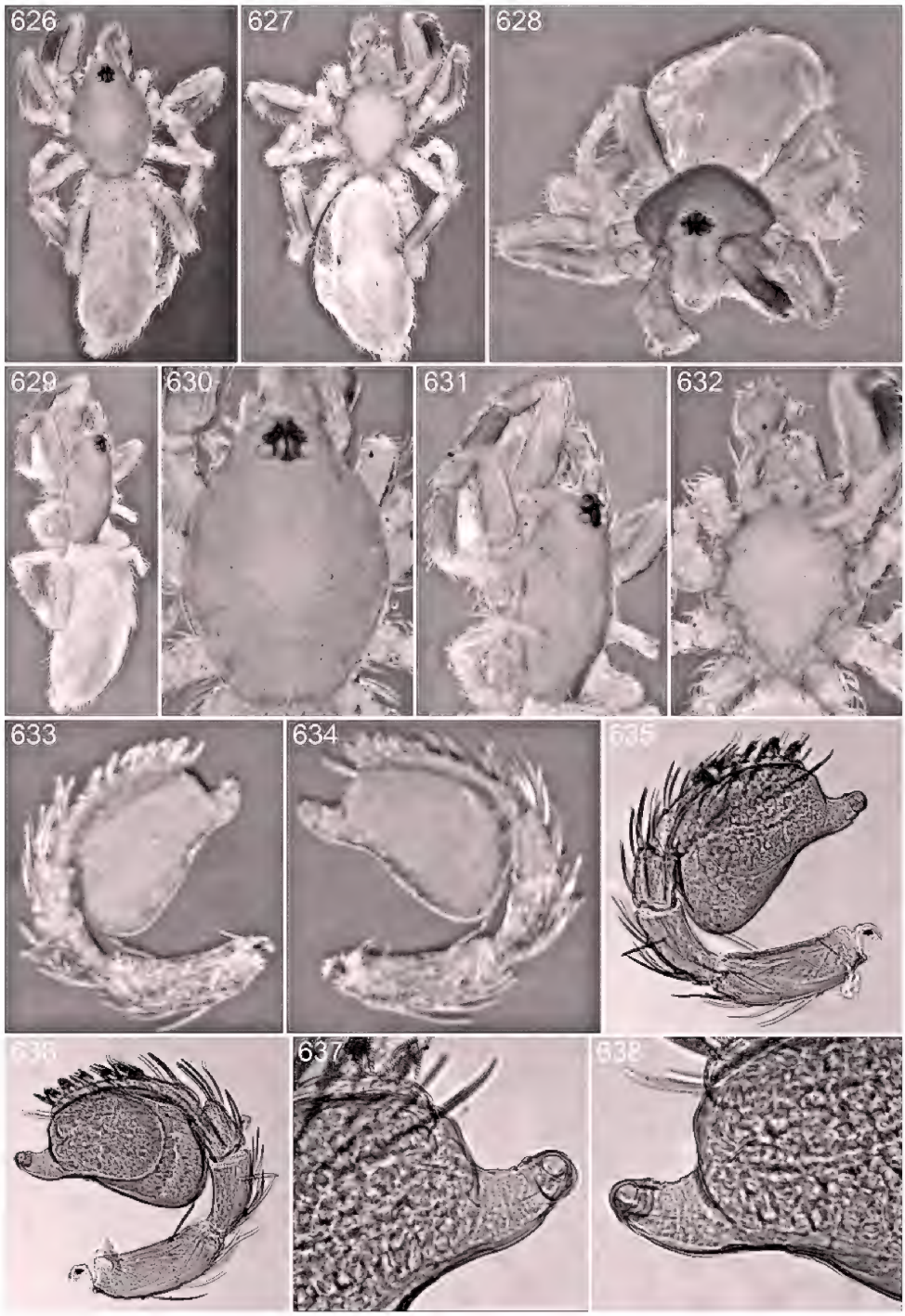
Figs. 600–609. *Longoonops bicolor*, new species, female. **600.** Habitus, dorsal view. **601.** Same, ventral view. **602.** Same, anterior view. **603.** Same, lateral view. **604.** Carapace, lateral view. **605.** Same, dorsal view. **606.** Epigastric area, ventral view. **607.** Sternum, ventral view. **608.** Genitalia, ventral view. **609.** Same, dorsal view.



Figs. 610–617. *Longoonops bicolor*, new species, female. **610.** Carapace, dorsal view. **611.** Same, anterior view. **612.** Chelicerae, anterior view. **613.** Labium and endites, ventral view. **614.** Serrula, ventral view. **615.** Palp, prolateral view. **616.** Same, retrolateral view. **617.** Palpal tarsus, dorsal view.



Figs. 618–625. *Longoonops bicolor*, new species, female. **618.** Sternum, ventral view. **619.** Femur II, lateral view. **620.** Tip of femur III, dorsal view. **621.** Tarsus III, dorsal view. **622.** Claws of leg II, apical view. **623.** Tarsal organ from leg I, dorsal view. **624.** Same, tarsus III. **625.** Same, palp.



Figs. 626–638. *Longoonops chickeringi*, new species, male. **626.** Habitus, dorsal view. **627.** Same, ventral view. **628.** Same, anterior view. **629.** Same, lateral view. **630.** Carapace, dorsal view. **631.** Same, lateral view. **632.** Sternum, ventral view. **633.** Left palp, prolateral view (stereoscope). **634.** Same, retrolateral view. **635.** Same, prolateral view (compound microscope). **636.** Same, retrolateral view. **637.** Embolus, prolateral view. **638.** Same, retrolateral view.

Figs. 639–648. *Longoonops chickeringi*, new species, female. **639.** Habitus, dorsal view. **640.** Same, ventral view. **641.** Same, anterior view. **642.** Same, lateral view. **643.** Carapace, lateral view. **644.** Same, dorsal view. **645.** Epigastric area, ventral view. **646.** Sternum, ventral view. **647.** Genitalia, ventral view. **648.** Same, dorsal view.

Longoonops padiscus (Chickering), new combination
Figures 649–703

Stenoonops padiscus Chickering, 1969: 24, figs. 64–68 (male holotype from 3 mi E May Pen, St. Catherine Par., Jamaica, in MCZ; examined).

DIAGNOSIS: Males can be recognized by the short, wide, distally recurved embolus (figs. 656–661), females by W-shaped posterior genitalic margin (figs. 702, 703).

MALE (PBI_OON 367, figs. 649–679): Total length 1.43. Endites without obvious modifications. Legs and abdomen without color pattern. Embolus short, wide, tip directed prolaterally (figs. 656–661, 676–679).

FEMALE (PBI_OON 369, figs. 680–703): Total length 1.50. Posterior genitalic margin W-shaped (figs. 702, 703).

MATERIAL EXAMINED: JAMAICA: **St. Andrew:** Ferry, 9–10 mi W Red Hills Road, Oct. 28, 1957 (A. Chickering, MCZ 68343, PBI_OON 27180), 1♀; Hermitage Reservoir, Nov. 26, 1957 (A. Chickering, MCZ 72087, PBI_OON 26441), 1♀; Newcastle Road, 5 mi from Kingston, May 10, 1956 (C. Hoff, MCZ 68346, PBI_OON 27181), 1♂ (paratype). **St. Catherine:** 2 mi NW Ferry, May 17, 1956, moist bark of tree in woods (C. Hoff, MCZ PBI_OON 368), 1♂, same date, moss and bark from trees in woods (C. Hoff, MCZ 68347, PBI_OON 370), 1♀; 3 mi E May Pen, Nov. 22, 1957 (A. Chickering, MCZ 22462, PBI_OON 367), 1♂ (holotype). **St. Thomas:** Morant Point, May 6, 1956 (C. Hoff, MCZ 68344, PBI_OON 27182), 1♀; Morant Point, Maumee Bay, Oct. 14, 1957 (C. Hoff, MCZ PBI_OON 369), 1♀ (paratype).

DISTRIBUTION: Jamaica.

Longoonops gorda, new species
Figures 704–726

TYPE: Male holotype and female allotype taken on Virgin Gorda, Virgin Islands (Aug. 1966; A. Chickering), deposited in MCZ (71407, PBI_OON 27350).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males resemble those of *S. bicolor* but have a basally wider embolus (figs. 711–716); females also resemble those of *S. bicolor* in having very simple genitalia, but have the median sclerotization situated more anteriorly than in *S. bicolor* (figs. 725, 726).

MALE (PBI_OON 27350, figs. 704–716): Total length 1.28. Endites with long, oblique, longitudinal ridge. Soft portions of abdominal holotype with anterior and posterior dark areas. Legs without color pattern. Embolus short, basally thickened, retrolateral process curved (figs. 711–716).

FEMALE (PBI_OON 27350, figs. 717–726): Total length 1.56. Genitalia with ovoid plate bearing anteriorly situated median invagination (figs. 725, 726).

OTHER MATERIAL EXAMINED: One female taken with the types.

DISTRIBUTION: Virgin Islands (Virgin Gorda).

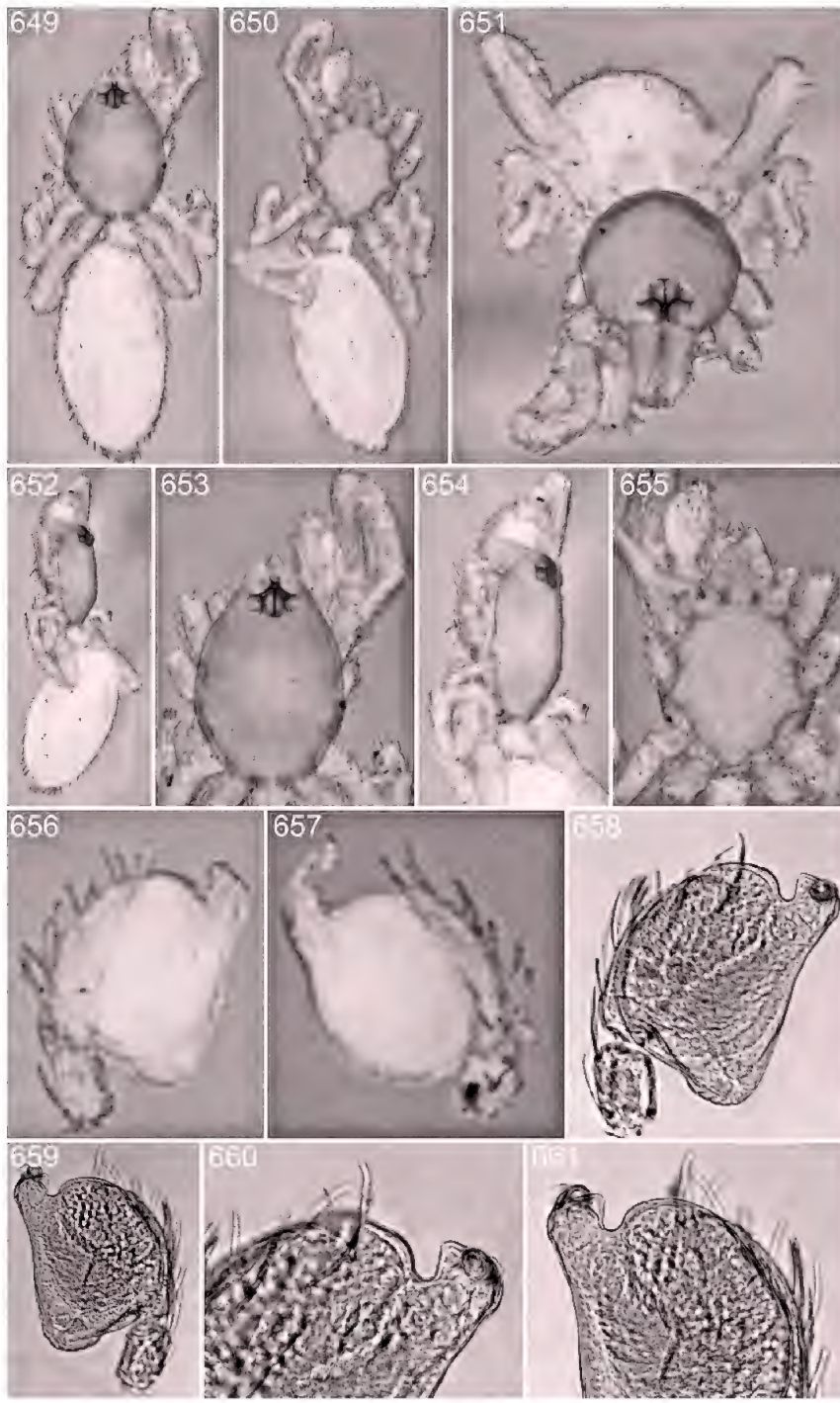
Australoonops Hewitt

Australoonops Hewitt, 1915: 92 (type species by monotypy *Australoonops granulatus* Hewitt).

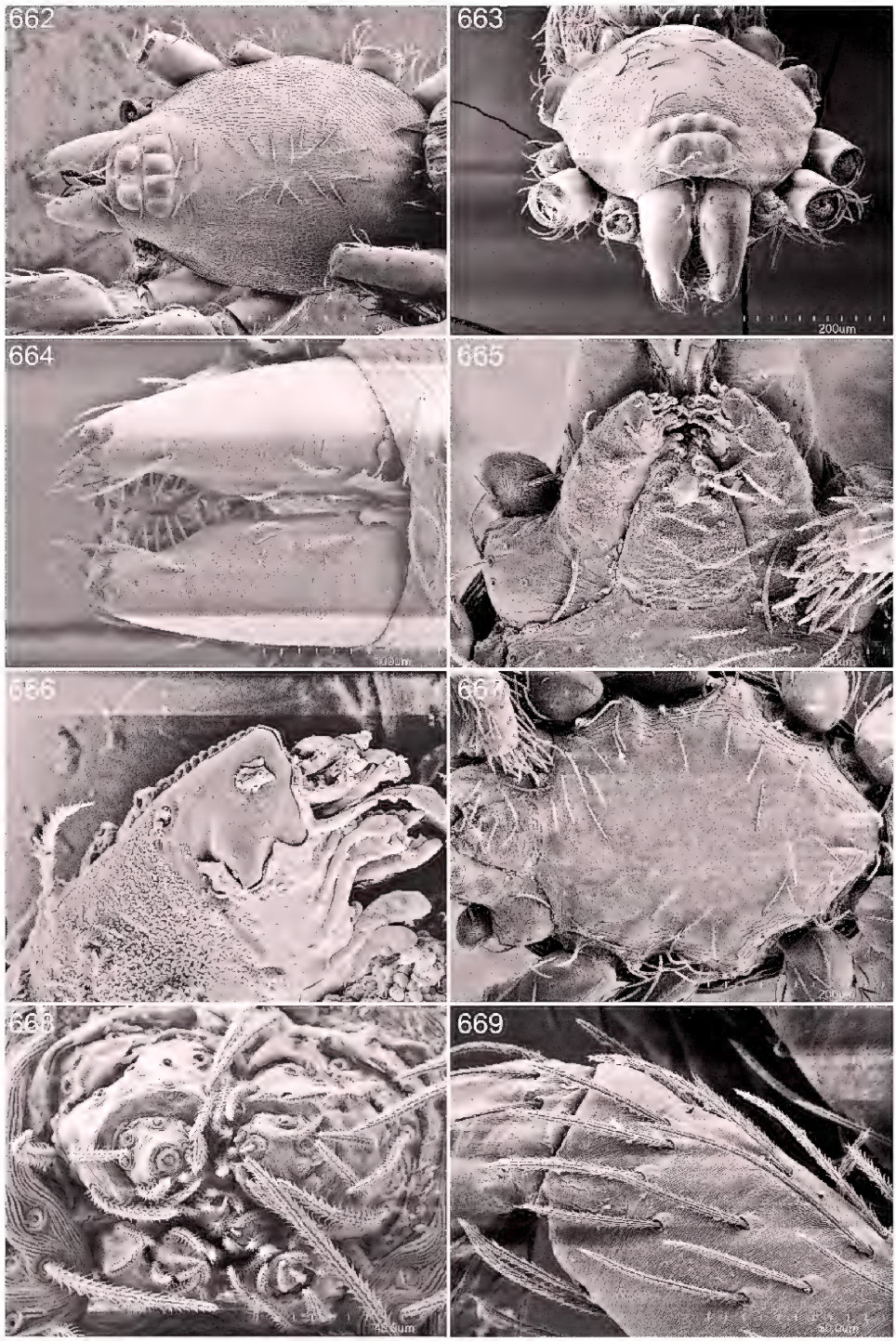
DIAGNOSIS: Members of this genus resemble those of *Stenoonops*, although they lack the distinct furrows separating the sternal extensions (figs. 746, 783) that are here considered synapomorphic for that genus. In *Australoonops*, the male palpal bulb and cymbium are completely fused, with no trace of a seam between them (figs. 752, 753); the female epigastric scutum has a distinctly recurved posterior margin, and the postepigastric scutum is ovoid (fig. 770).

NOTE: Hewitt (1915: 94) described and illustrated what he considered to be an unusual modification of the labium of the type specimen, which "appears to be continued anteriorly as a very narrow median colourless process, the margins of which are obscured by downwardly directed stiffish hairs; including its process the labium is much longer than broad." We have seen specimens with a similar appearance (e.g., fig. 827), but there is no actual process on the labium (figs. 743, 744). The "colourless process" is merely the tip of the labrum, fully expanded and seen in ventral view.

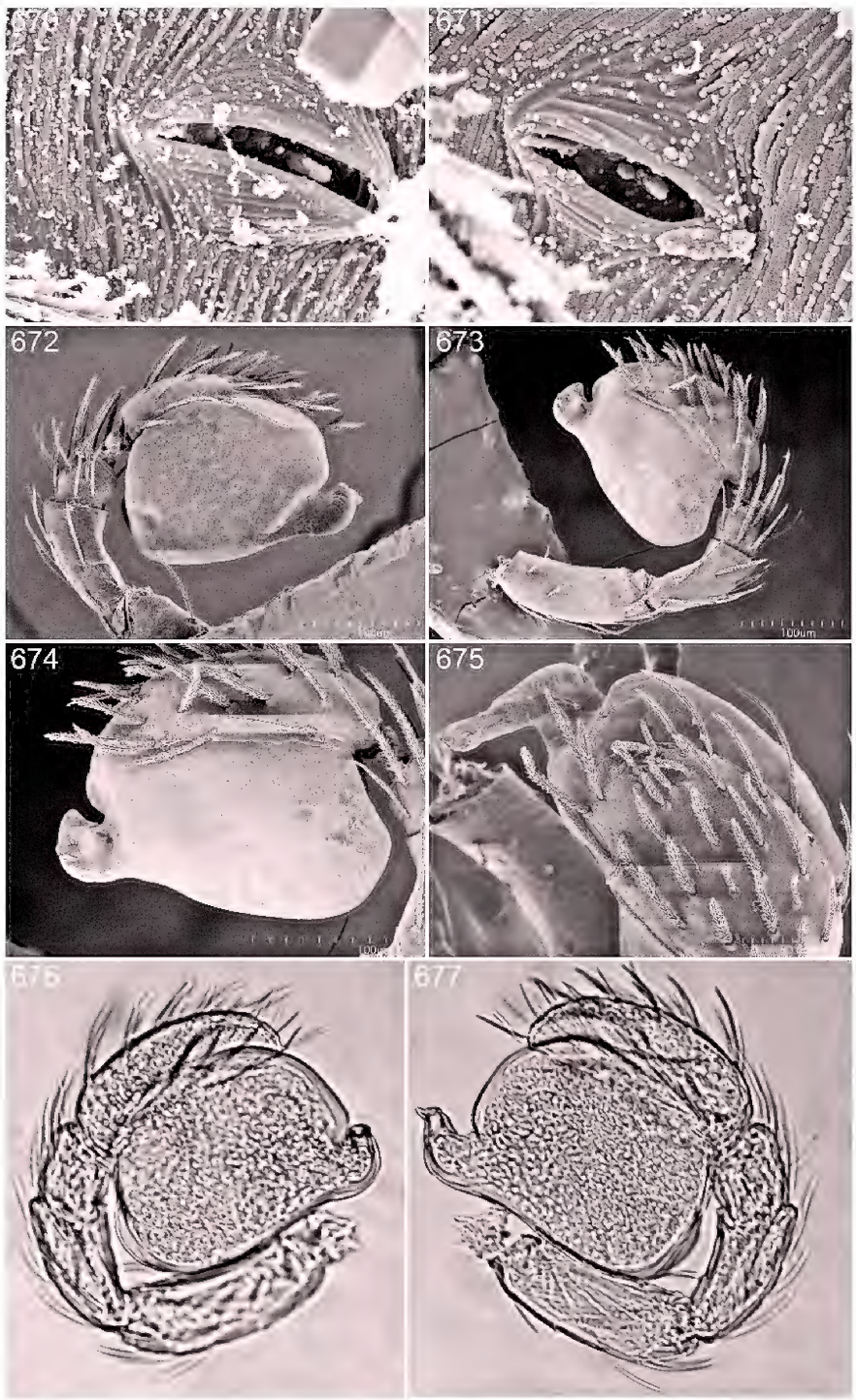
DESCRIPTION: Total length of males 1.6–2.0, of females 1.9–2.6; cephalothorax pale orange, legs and palpi yellow, abdomen white. CEPHALOTHORAX: Carapace with-



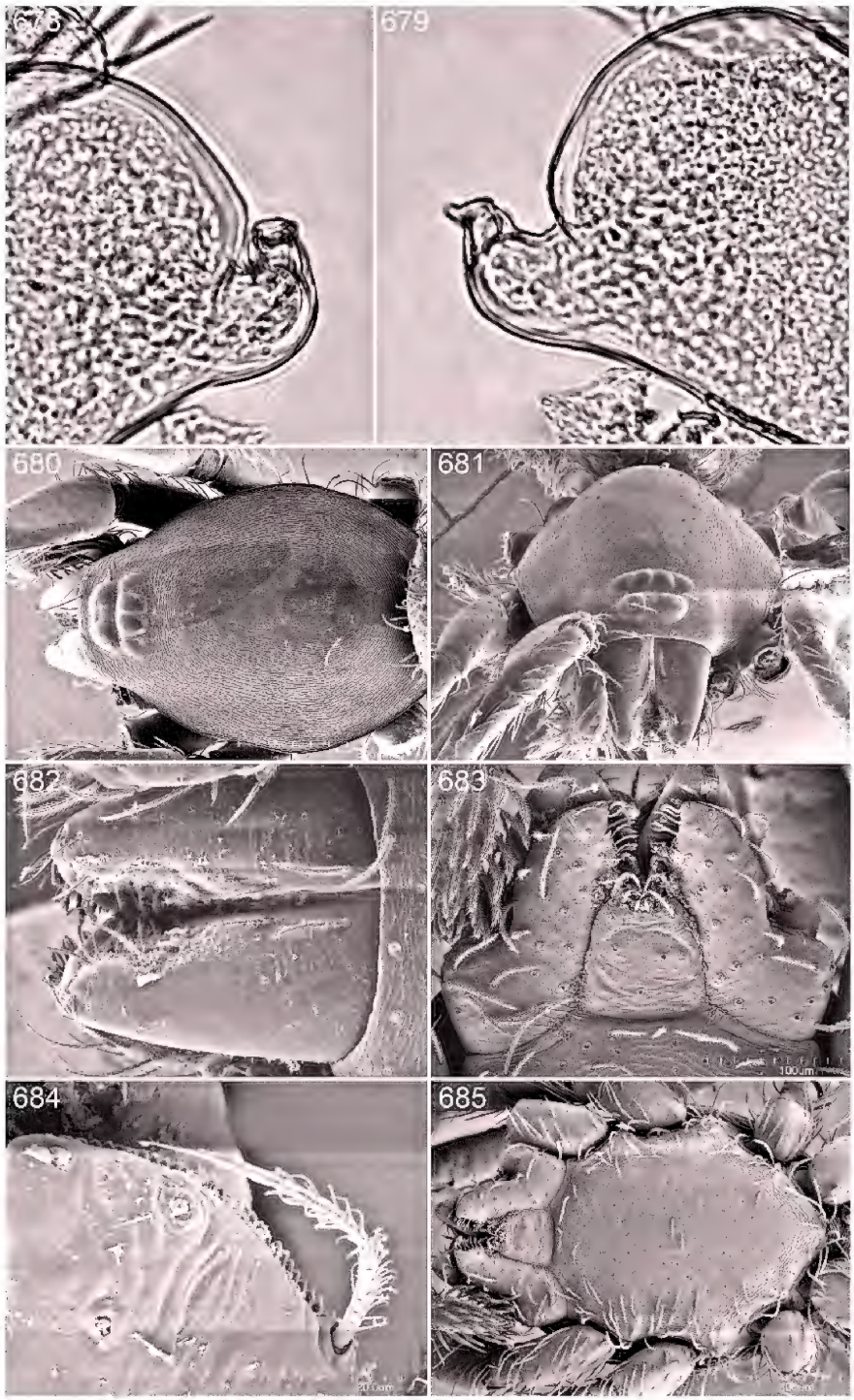
Figs. 649–661. *Longoonops padiscus* (Chickering), male holotype. **649.** Habitus, dorsal view. **650.** Same, ventral view. **651.** Same, anterior view. **652.** Same, lateral view. **653.** Carapace, dorsal view. **654.** Same, lateral view. **655.** Sternum, ventral view. **656.** Left palp, prolateral view (stereoscope). **657.** Same, retrolateral view. **658.** Same, prolateral view (compound microscope). **659.** Same, retrolateral view. **660.** Embolus, prolateral view. **661.** Same, retrolateral view.



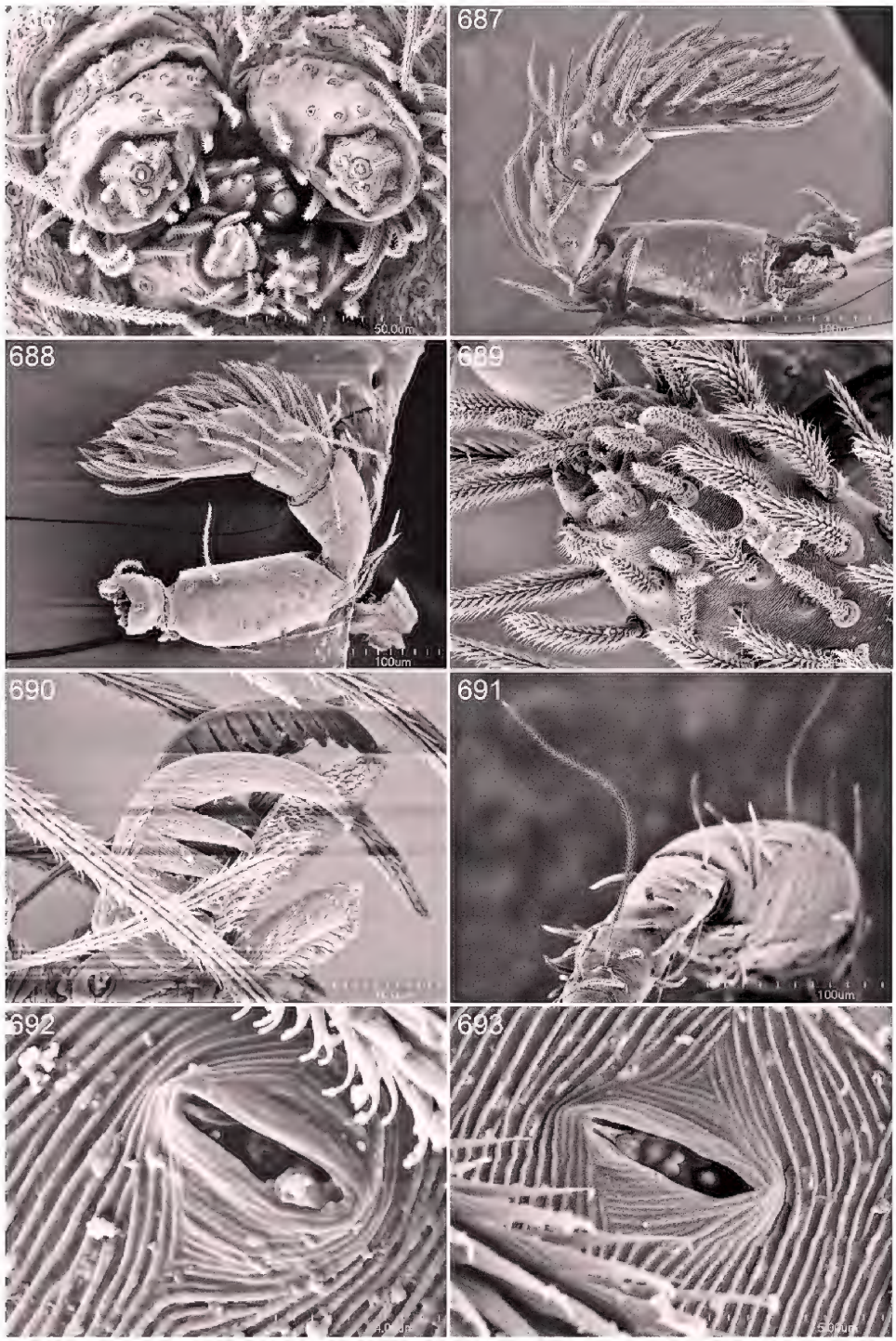
Figs. 662–669. *Longoonops padiscus* (Chickering), male. **662.** Carapace, dorsal view. **663.** Same, anterior view. **664.** Chelicerae, anterior view. **665.** Labium and endites, ventral view. **666.** Tip of endite, ventral view. **667.** Sternum, ventral view. **668.** Spinnerets, apical view. **669.** Femur IV, oblique lateral view.



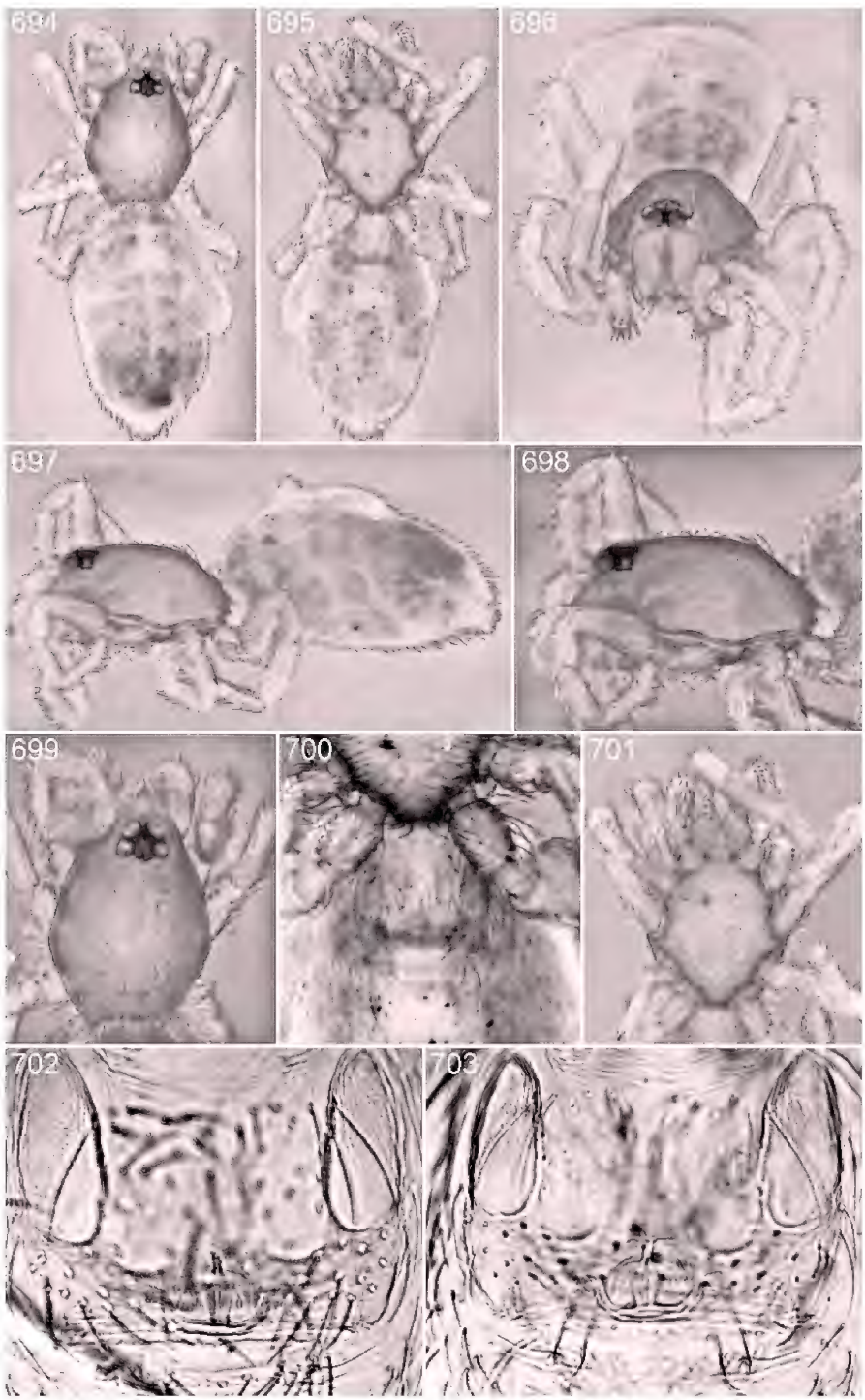
Figs. 670–677. *Longoonops padiscus* (Chickering), male. **670.** Tarsal organ, leg I, dorsal view. **671.** Tarsal organ, palp, same. **672.** Left palp, prolateral view. **673.** Same, retrolateral view. **674.** Palpal bulb, retrolateral view. **675.** Tip of cymbium, dorsal view. **676.** Left palp, PBI_OON 368, prolateral view (compound microscope). **677.** Same, retrolateral view.



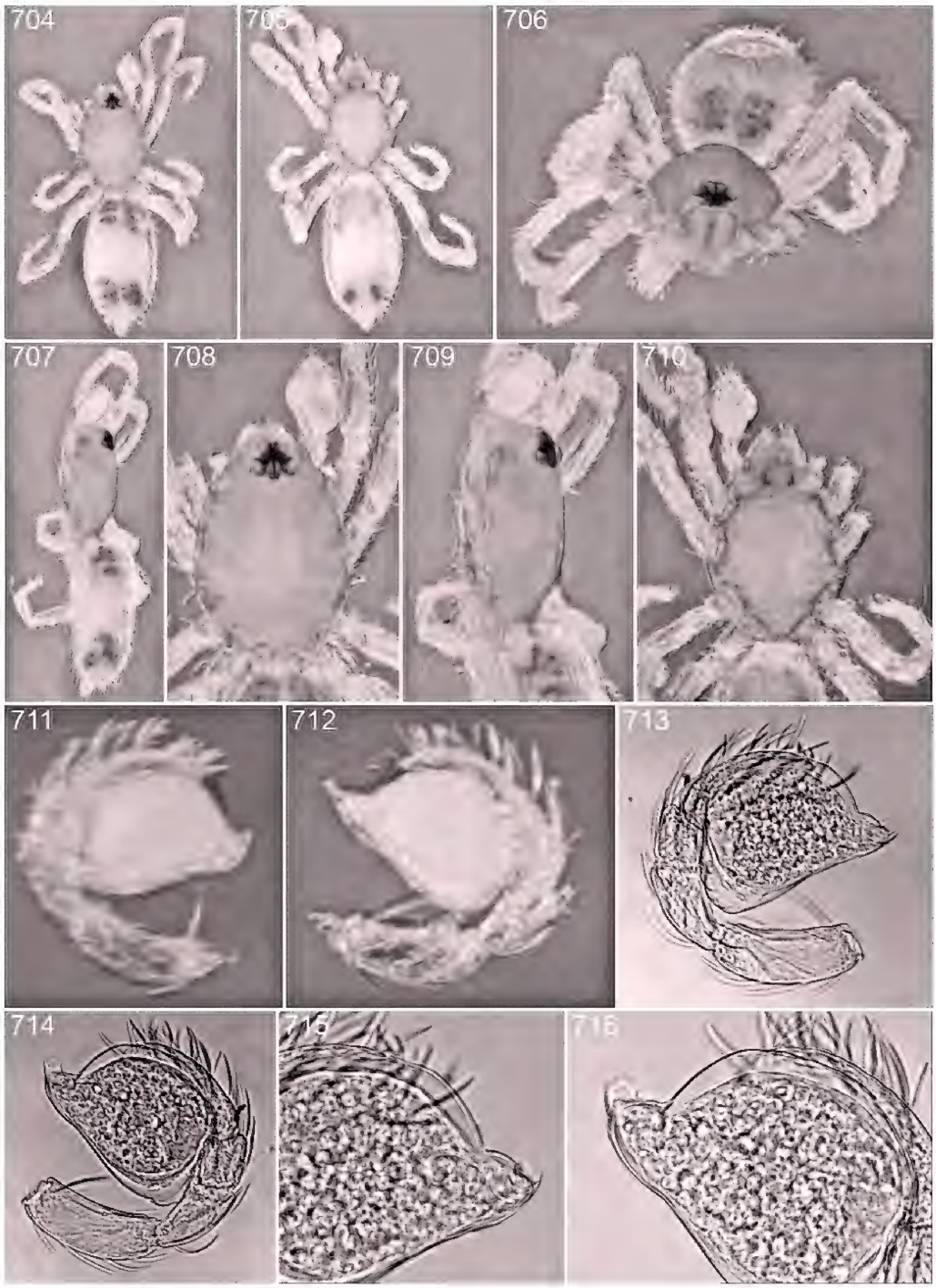
Figs. 678–685. *Longoonops padiscus* (Chickering). **678, 679.** Embolus, PBI_OON 368, prolateral and retrolateral views (compound microscope). 680–685. Female. **680.** Carapace, dorsal view. **681.** Same, anterior view. **682.** Chelicerae, anterior view. **683.** Labium and endites, ventral view. **684.** Serrula, ventral view. **685.** Sternum, ventral view.



Figs. 686–693. *Longoonops padiscus* (Chickering), female. **686.** Spinnerets, apical view. **687.** Palp, prolateral view. **688.** Same, retrolateral view. **689.** Tip of palpal tarsus, dorsal view. **690.** Claws of leg I, lateral view. **691.** Trichobothrium, metatarsus I, dorsal view. **692.** Tarsal organ from leg I, dorsal view. **693.** Tarsal organ from palp, same.



Figs. 694–703. *Longoonops padiscus* (Chickering), female. **694.** Habitus, dorsal view. **695.** Same, ventral view. **696.** Same, anterior view. **697.** Same, lateral view. **698.** Carapace, lateral view. **699.** Same, dorsal view. **700.** Epigastric area, ventral view. **701.** Sternum, ventral view. **702.** Genitalia, ventral view. **703.** Same, dorsal view.



Figs. 704–716. *Longoonops gorda*, new species, male. **704.** Habitus, dorsal view. **705.** Same, ventral view. **706.** Same, anterior view. **707.** Same, lateral view. **708.** Carapace, dorsal view. **709.** Same, lateral view. **710.** Sternum, ventral view. **711.** Left palp, prolateral view (stereoscope). **712.** Same, retrolateral view. **713.** Same, prolateral view (compound microscope). **714.** Same, retrolateral view. **715.** Embolus, prolateral view. **716.** Same, retrolateral view.

Figs. 717–726. *Longoonops gorda*, new species, female. **717.** Habitus, dorsal view. **718.** Same, ventral view. **719.** Same, anterior view. **720.** Same, lateral view. **721.** Carapace, lateral view. **722.** Same, dorsal view. **723.** Epigastric area, ventral view. **724.** Sternum, ventral view. **725.** Genitalia, ventral view. **726.** Same, dorsal view.

out any pattern, elongate oval in dorsal view, pars cephalica flat in lateral view, anteriorly narrowed to 0.49 times its maximum width or less, with rounded posterolateral corners; posterolateral edge without pits, posterior margin not bulging below posterior rim, anterolateral corners without extension or projections, posterolateral surface without spikes, sides granulate (figs. 740–742, 760, 762, 774–776); thorax without depressions, fovea absent, without radiating rows of pits; lateral margin straight, smooth, without denticles; plumose setae near posterior margin of pars thoracica absent; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae dark, needlelike; marginal setae absent. Clypeus margin unmodified, straight in front view, vertical in lateral view, low, ALE separated from edge of carapace by less than their radius, median projection absent; setae dark, needlelike. Chilum absent. Eyes six, well developed, ALE largest, ALE oval, PME squared, PLE circular; ALE separated by less than their radius, ALE-PLE separated by less than ALE radius, PME touching throughout most of their length, PLE-PME separated by less than PME radius; posterior eye row straight from above, procurved from front. Sternum longer than wide, coloration uniform, fused to carapace, median concavity absent, without hair tufts, without radial furrows between coxae I–II, II–III, III–IV (fig. 746), radial furrow opposite coxae III absent; surface smooth but covered with small round pits present everywhere but middle (figs. 761, 763, 783), sickle-shaped structures absent; anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension, anterior corners unmodified, lateral margin without infracoxal grooves, distance between coxae II and III greater than distance between coxae I and II, and coxae III and IV, extensions of precoxal triangles absent, lateral margins with three pairs of lateral projections, with posterior hump; setae sparse, dark, spatulate, in group at base of coxae, originating from surface. Chelicerae slightly divergent, anterior face unmodified; without teeth on promargin or retromargin; fang without toothlike projections, directed medially, shape normal, without prominent basal process, tip unmodified; setae dark, spatulate, densest medially; paturon inner margin with pairs of smooth, distally enlarged setae (fig. 777), distal region unmodified, posterior surface unmodified, promargin with row of flattened setae, inner margin unmodified, laminate groove absent. Labium rectangular, fused to sternum, anterior margin indented at middle, same as sternum in sclerotization, with six or more setae on anterior margin, subdistal portion with unmodified setae. Endites distally not excavated, serrula present in single row (figs. 743, 745, 778), anteromedian tip unmodified, posteromedian part unmodified, same as sternum in sclerotization. Female palp without claw or spines; patella without prolateral row of ridges; tarsus with thickened setae (figs. 779, 780), dorsal surface with subdistal patch of shortened setae (fig. 781), tarsal organ with elongate opening (fig. 782). ABDOMEN: Cylindrical, without long posterior extension, rounded posteriorly, interscutal membrane without rows of small sclerotized platelets; dorsum soft portions without color pattern. Supposed book lung covers large, ovoid, without setae, anterolateral edge unmodified. Posterior spiracles connected by groove. Pedicel tube short, unmodified, scutopedicel region unmodified, scutum not extending far dorsal of pedicel, plumose hairs absent, matted setae on anterior ventral abdomen in pedicel area absent, cuticular outgrowths near pedicel absent. Dorsal scutum absent. Epigastric scutum weakly sclerotized, not surrounding pedicel, not protruding, small lateral sclerites absent, without lateral joints in females, posterior margin recurved (fig. 790). Postepigastric scutum weakly sclerotized, short, ovoid, only around epigastric furrow, not fused to epigastric scutum, anterior margin unmodified, without posteriorly directed lateral apodemes. Spinneret scutum absent; supraanal scutum absent. Dorsum setae dark, needlelike; epigastric area frontal setae thickened, dark, needlelike; postepigastric area setae dark, needlelike; dense patch of setae anterior to spinnerets absent. Colulus absent. Spinnerets scanned only in *A. granulatus* (figs. 747, 786); anterior lateral spinnerets with single major ampullate gland spigot and three piriform gland spigots (fig. 787), posterior median

spinnerets with single spigot (fig. 788), posterior laterals with two spigots (fig. 789). LEGS: Without color pattern; femur IV not thickened, same size as femora I–III, femora with subdistal transverse row of dorsal setae at slight constriction (fig. 784); patella plus tibia I shorter than carapace; tibia I unmodified, tibia IV specialized hairs on ventral apex absent, tibia IV ventral scopula absent; metatarsi I and II meso-apical comb absent, metatarsi III and IV weak ventral scopula absent. Leg spines absent. Lateral surfaces of superior claws with few large, basal teeth, median surfaces with numerous tiny, closely spaced, more distally situated teeth (figs. 748–750, 792–795), inferior claw absent. Trichobothrial bases with numerous ridges (fig. 785); tarsal organ of legs I, II rounded, of legs III, IV elongate (figs. 756–759, 796, 797). GENITALIA: Male epigastric region with sperm pore not visible; furrow without Ω-shaped insertions, without setae. Male palp of normal size, not strongly sclerotized, right and left palps symmetrical, embolus light, without prolateral excavation; trochanter of normal size, unmodified; femur of normal size, two or more times as long as trochanter, without posteriorly rounded lateral dilation, attaching to patella basally; patella shorter than femur, not enlarged, without prolateral row of ridges, setae unmodified; tibia with at least two trichobothria (fig. 751); cymbium ovoid in dorsal view, completely fused with bulb, no seam visible (figs. 752, 753), not extending beyond distal tip of bulb, plumose setae absent, without stout setae, with distal patch of shortened setae (754); tarsal organ elongate (fig. 755); bulb 1–1.5 times as long as cymbium, stout, tapering apically. Internal female genitalia with distinct anterior and posterior receptacula (fig. 791).

DISTRIBUTION: South Africa and Mozambique.

Key to Species of *Australoonops*

1. Elevated portion of pars cephalica with obvious pits (figs. 731, 741, 769, 775) . . . . . *A. granulatus*
– Elevated portion of pars cephalica smooth (figs. 760, 762) 2
2. Tip of embolus curved dorsally (figs. 828–833), posterior portion of anterior receptaculum relatively wide (figs. 842, 843) . . . . . *A. haddadi*
– Tip of embolus curved ventrally (figs. 805–810), posterior portion of anterior receptaculum relatively narrow (figs. 819, 820) . . . . . *A. skaife*

Australoonops granulatus Hewitt
Figures 727–759, 764–797

Australoonops granulatus Hewitt, 1915: 93, fig. 3 (male holotype from Grahamstown, Eastern Cape, South Africa, in AMG; examined).

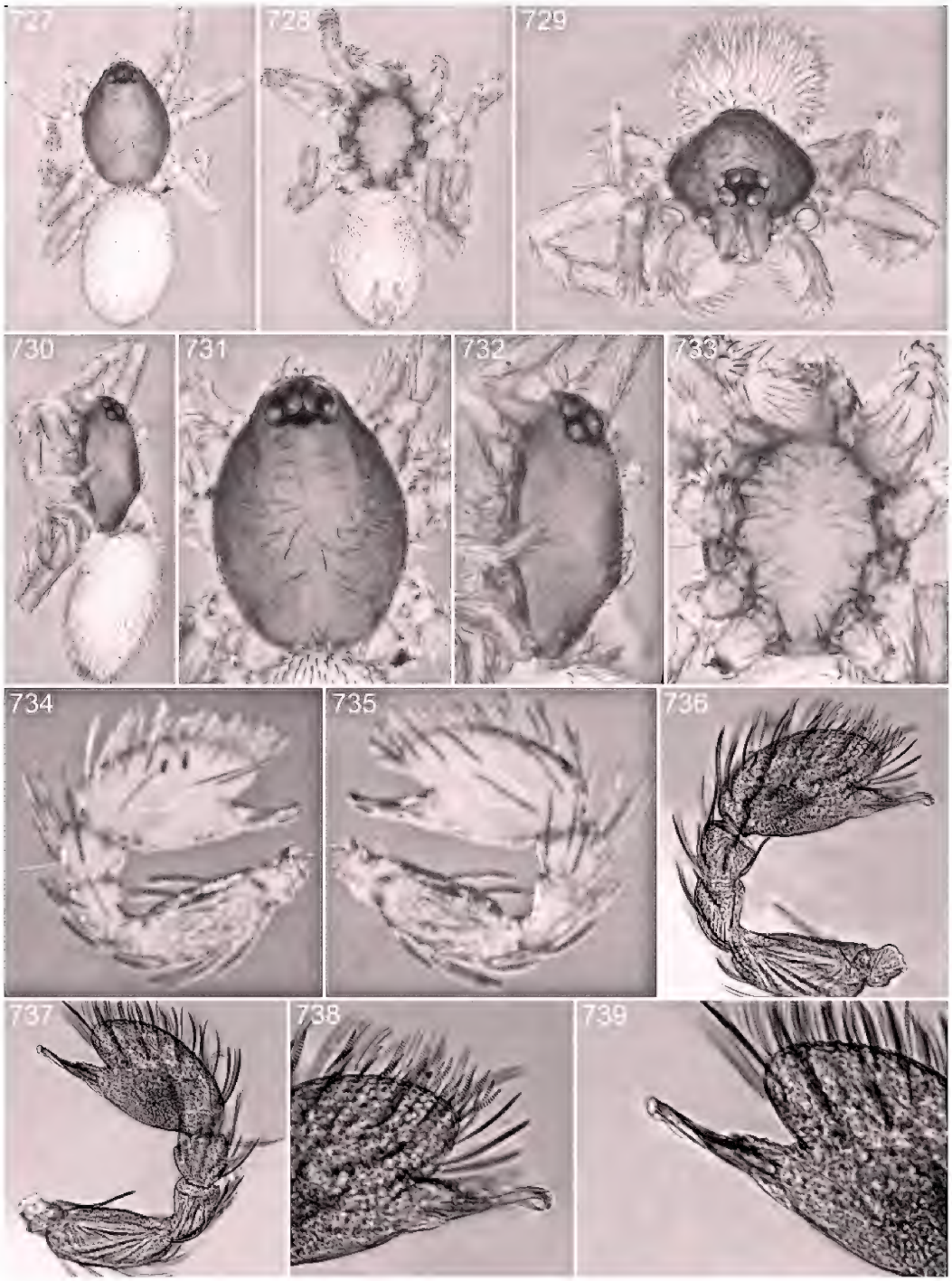
NOTE: The holotype is in terrible condition, being completely flattened and missing both palps. However, microsculpture is present everywhere on the carapace, indicating that the type belongs to this species rather than either of its congeners.

DIAGNOSIS: The elevated portion of the pars cephalica is distinctly pitted (figs. 731, 741, 769, 775) in both sexes; males have a relatively short embolus (figs. 734–739), and females have a relatively wide anterior genitalic projection (figs. 772, 773).

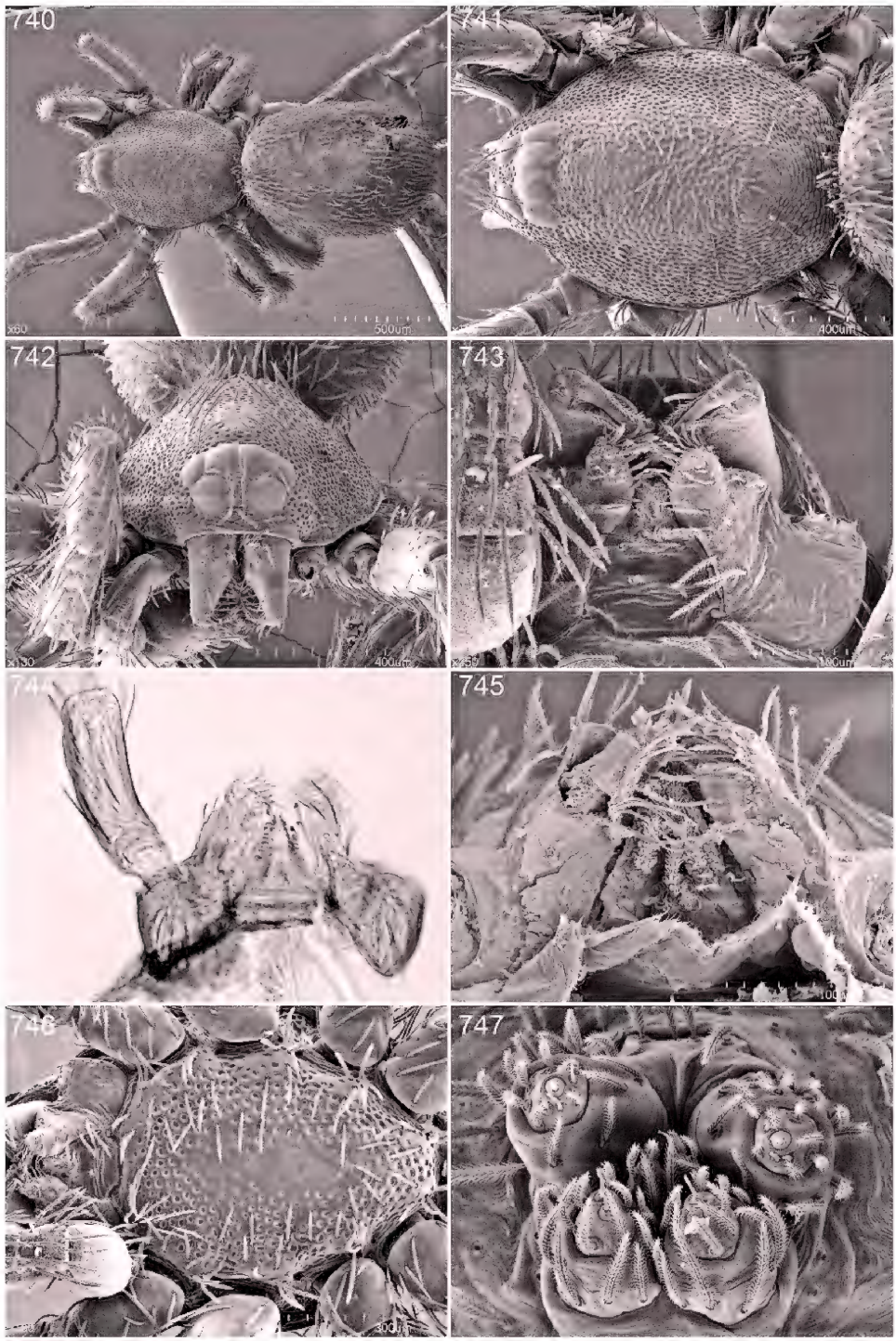
MALE (PBI_OON 8922, figs. 727–759): Total length 1.65. Elevated portion of pars cephalica pitted, sides with rounded tubercles, pars thoracica with elongated tubercles. Endites with anteromedian projection bearing flattened setae with undivided tips. Embolus originating subdistally, straight, narrowed at about half its length (figs. 734–739).

FEMALE (PBI_OON 8922, figs. 764–797): Total length 2.01. Anterior genitalic projection originating from squared base, not greatly narrowed anteriorly, posterior receptaculum rounded, apparently with posterior glands (figs. 772, 773).

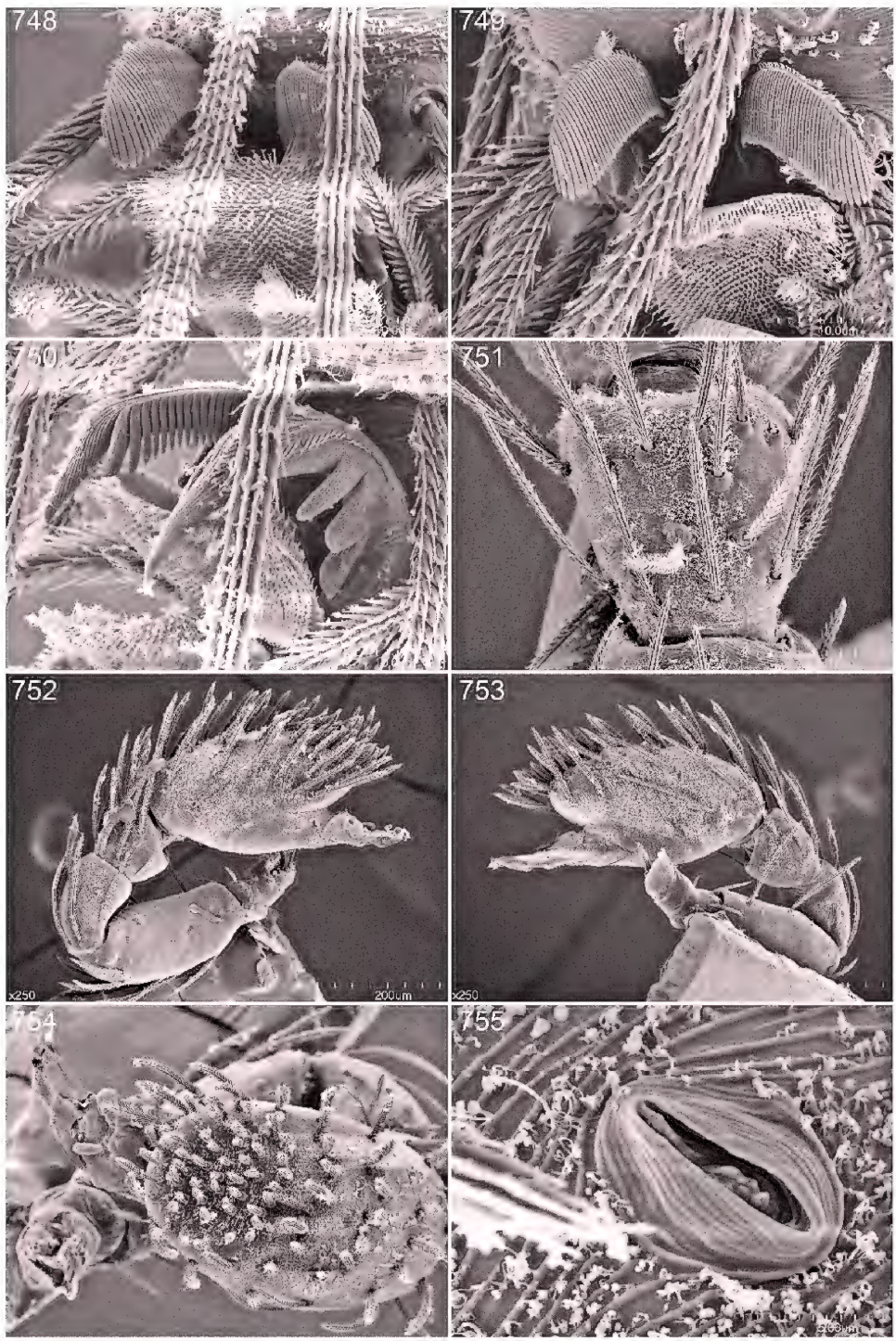
MATERIAL EXAMINED: SOUTH AFRICA: **Eastern Cape:** Grahamstown, July 1913 (R. Godfrey, J. Hewitt, AMG, on loan to Natal Museum, NM 14711, PBI_OON 2194), 1♂ (holotype); Hogsback, Apr. 2, 2006, leaf litter, pine plantation (PPRI PBI_OON 28823), 1♀; Maitland Dunes, 35 km W Port Elizabeth, Apr. 29, 1999, sieved litter, fynbos (R. Jocqué, MRAC 220079, PBI_OON 29156), 2♂. **Western Cape:** Constantia, Vlakkenberg, Jan. 5–22, 1992, pitfall, fynbos near summit (B. Heydenrych, MRAC 220078, PBI_OON 29177), 1♀; dunes N of Muizenberg, Sept. 29–Oct. 13, 1991



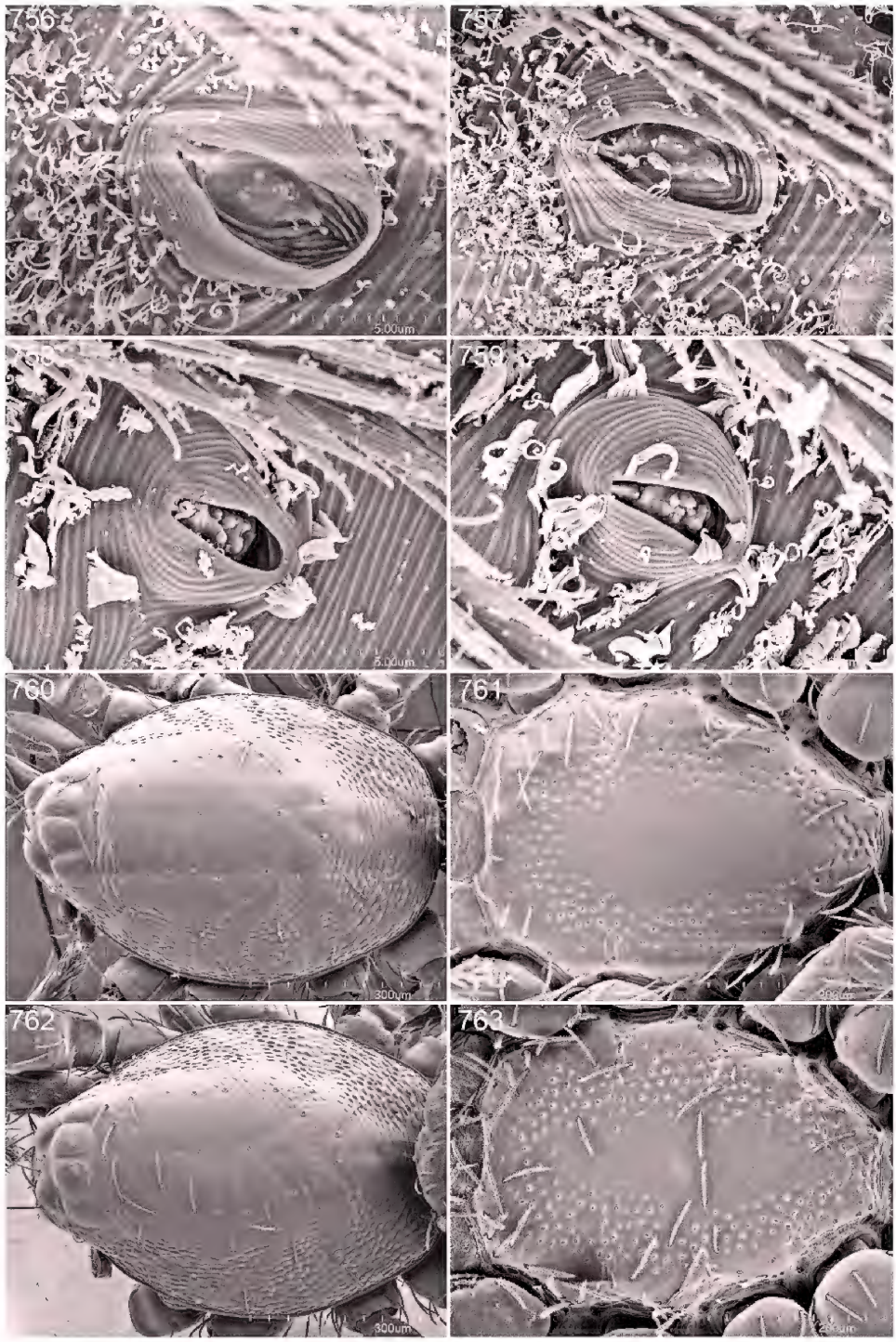
Figs. 727–739. *Australoonops granulatus* Hewitt, male. **727.** Habitus, dorsal view. **728.** Same, ventral view. **729.** Same, anterior view. **730.** Same, lateral view. **731.** Carapace, dorsal view. **732.** Same, lateral view. **733.** Sternum, ventral view. **734.** Left palp, prolateral view (stereoscope). **735.** Same, retrolateral view. **736.** Same, prolateral view (compound microscope). **737.** Same, retrolateral view. **738.** Embolus, prolateral view. **739.** Same, retrolateral view.



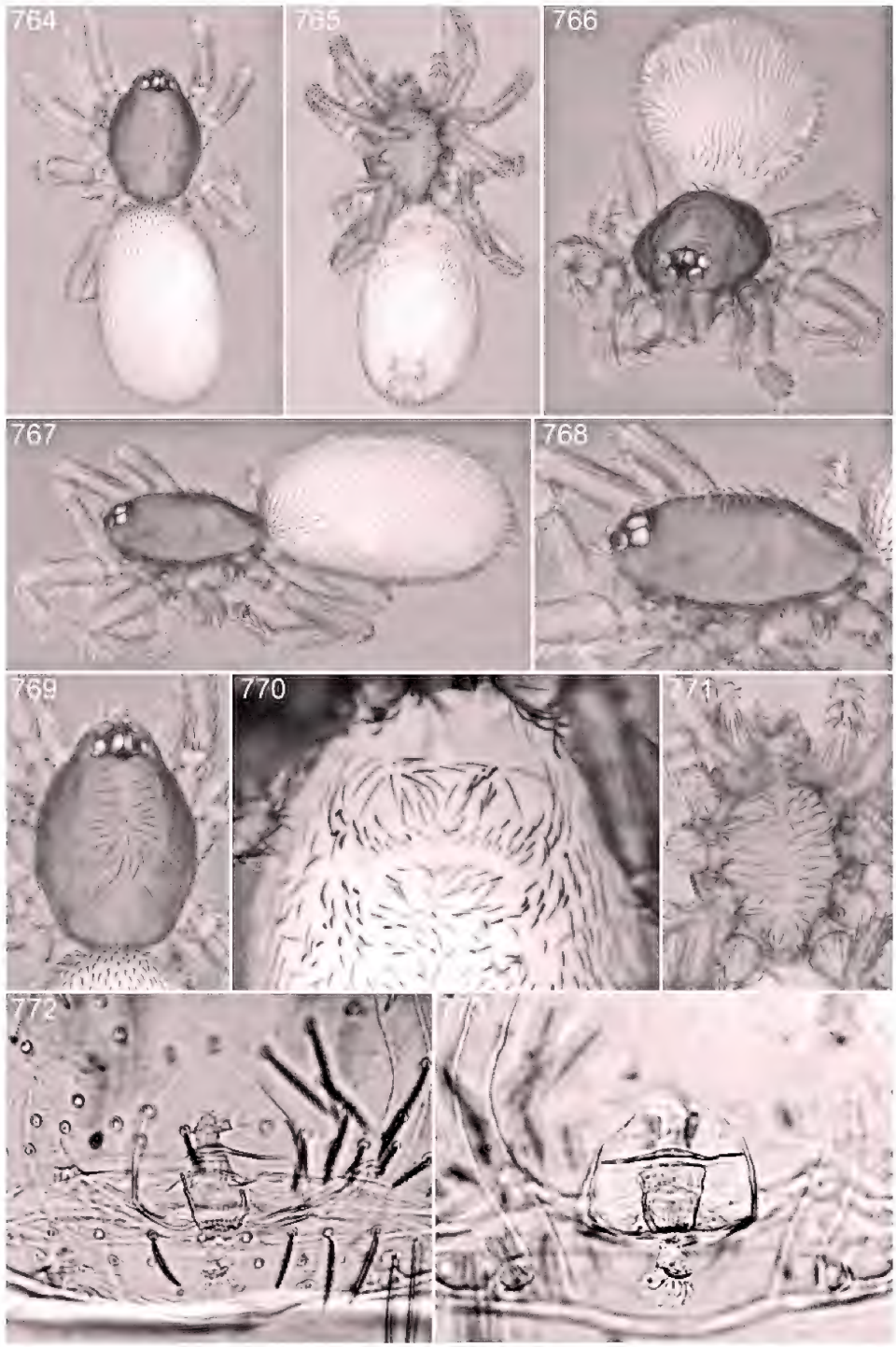
Figs. 740–747. *Australoonops granulatus* Hewitt, male. **740.** Habitus, dorsal view. **741.** Carapace, dorsal view. **742.** Same, anterior view. **743.** Labium and endites, ventral view. **744.** Same (compound microscope). **745.** Labrum and endites, dorsal view. **746.** Sternum, ventral view. **747.** Spinnerets, apical view.



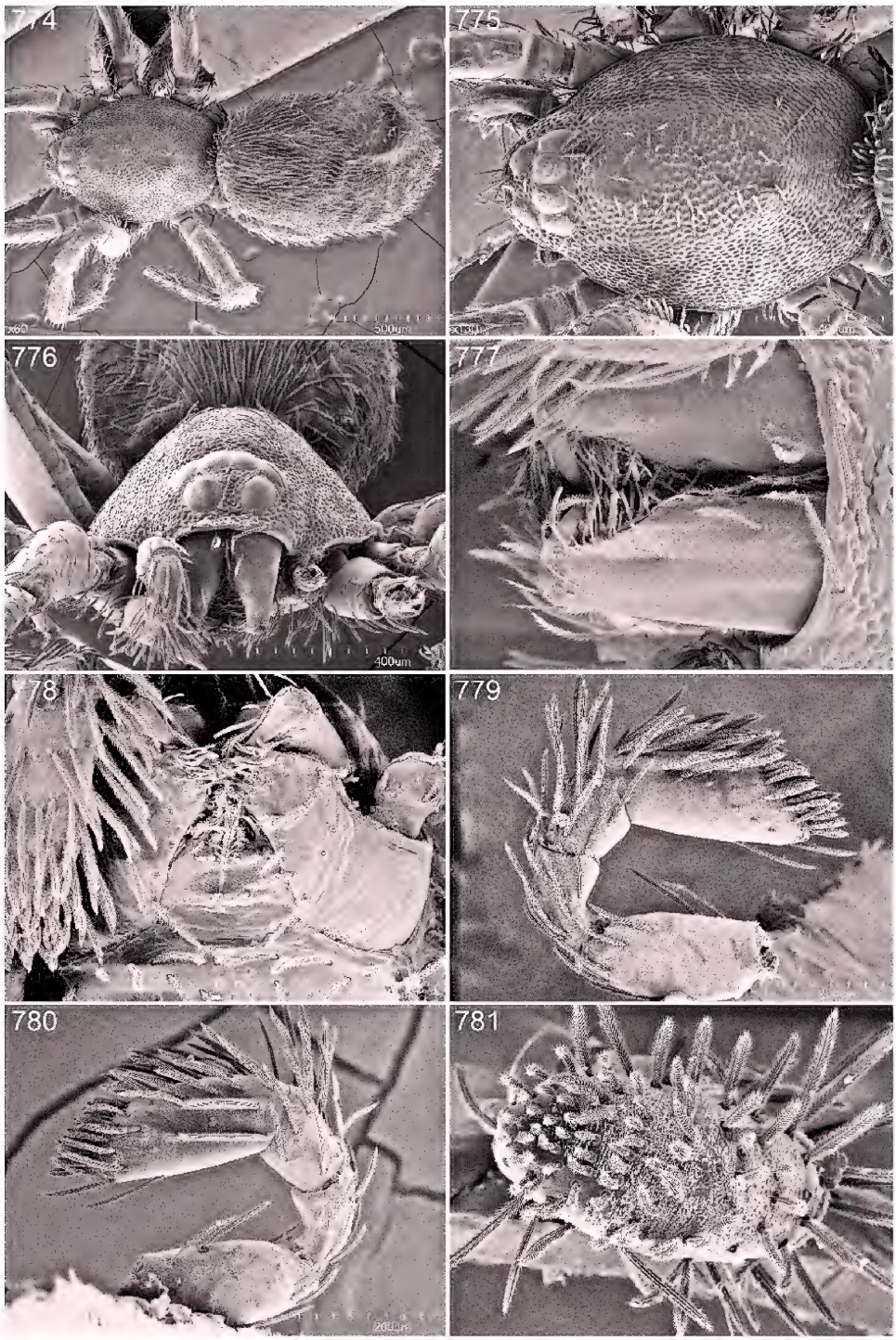
Figs. 748–755. *Australoonops granulatus* Hewitt, male. **748.** Claws of leg I, apical view. **749.** Same, leg II. **750.** Claws of leg IV, oblique lateral view. **751.** Palpal tibia, dorsal view. **752.** Left palp, prolateral view. **753.** Same, retrolateral view. **754.** Cymbium, dorsal view. **755.** Tarsal organ from palp, dorsal view.



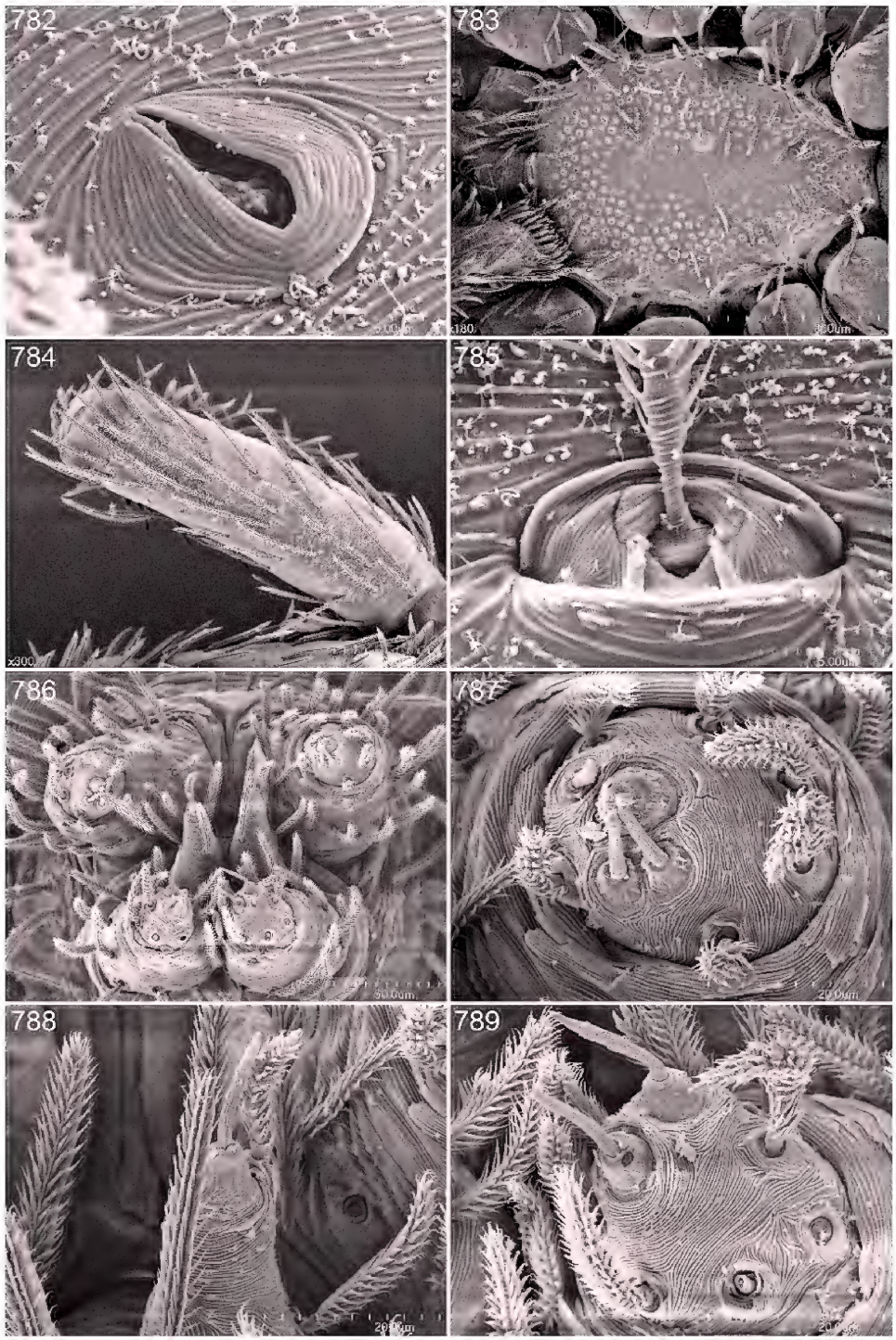
Figs. 756–759. *Australoonops granulatus* Hewitt, male. **756.** Tarsal organ from leg I, dorsal view. **757.** Same, leg II. **758.** Same, leg III. **759.** Same, leg IV. 760–763. *Australoonops skaife*, new species. **760.** Male carapace, dorsal view. **761.** Male sternum ventral view. **762.** Female carapace, dorsal view. **763.** Female sternum, ventral view.



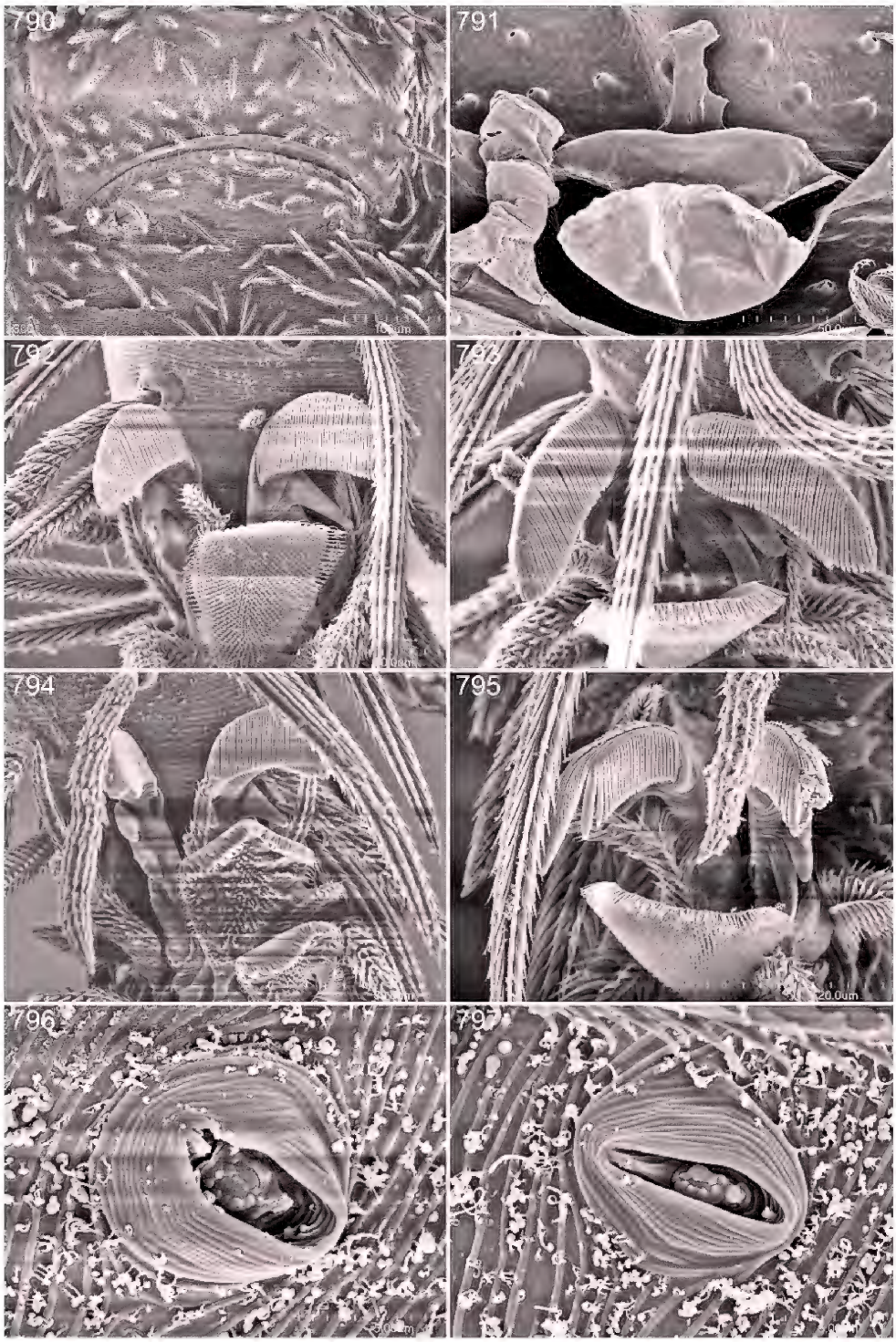
Figs. 764–773. *Australoonops granulatus* Hewitt, female. **764.** Habitus, dorsal view. **765.** Same, ventral view. **766.** Same, anterior view. **767.** Same, lateral view. **768.** Carapace, lateral view. **769.** Same, dorsal view. **770.** Epigastric area, ventral view. **771.** Sternum, ventral view. **772.** Genitalia, ventral view. **773.** Same, dorsal view.



Figs. 774–781. *Australoonops granulatus* Hewitt, female. **774.** Habitus, dorsal view. **775.** Carapace, dorsal view. **776.** Same, anterior view. **777.** Chelicerae, anterior view. **778.** Labium and endites, ventral view. **779.** Palp, prolateral view. **780.** Same, retrolateral view. **781.** Palpal tarsus, dorsal view.



Figs. 782–789. *Australoonops granulatus* Hewitt, female. **782.** Tarsal organ from palp, dorsal view. **783.** Sternum, ventral view. **784.** Femur II, dorsal view. **785.** Trichobothrial base, metatarsus II, dorsal view. **786.** Spinnerets, apical view. **787.** Anterior lateral spinneret, same. **788.** Posterior median spinneret, same. **789.** Posterior lateral spinneret, same.



Figs. 790–797. *Australoonops granulatus* Hewitt, female. **790.** Epigastric area, ventral view. **791.** Genitalia, digested, dorsal view. **792.** Claws of leg I, apical view. **793.** Same, leg II. **794.** Same, leg III. **795.** Same, leg IV. **796.** Tarsal organ from leg I, dorsal view. **797.** Same, leg III.

(R. Legg, MRAC 173827, PBI_OON 29131), 1♂; Jacobsbaai, 32°57.734′S, 17°53.520′E, Oct. 2, 2007, leaf litter, shrubs (C. Haddad, R. Lyle, PPRI PBI_OON 8922), 5♂, 5♀; Sederberg (J. Smith, MRAC 127808, PBI_OON 29157), 1♂.

DISTRIBUTION: Eastern and Western Cape, South Africa.

Australoonops skaife, new species
Figures 760–763, 798–820

TYPE: Male holotype taken in Winkler sample of leaf litter from dense bush in a strandveld/mountain fynbos ecotone at an elevation of 20 m at Olifantsbos, near Skaife Centre, Cape of Good Hope Nature Reserve, 34°15.76′S, 18°23.13′E, Western Cape, South Africa (Oct. 1988; H. Robertson), deposited in SAM (PBI_OON 34248).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: The elevated portion of the pars cephalica is smooth (figs. 760, 762); males have a narrow embolus with a ventrally curved tip (figs. 805–810), and females have the posterior portion of the anterior receptaculum relatively long and narrow (figs. 819, 820).

MALE (PBI_OON 34248, figs. 760, 761, 798–810): Total length 1.79. Elevated portion of pars cephalica smooth. Endites with long, oblique, longitudinal ridge. Embolus narrow throughout its length, with long secondary process and ventrally curved tip (figs. 805–810).

FEMALE (PBI_OON 28857, figs. 762, 763, 811–820): Total length 1.94. Posterior receptaculum short, narrower than posterior portion of anterior receptaculum, anterior projection long, narrow, abruptly expanded at tip (figs. 819, 820).

OTHER MATERIAL EXAMINED: South Africa: **Eastern Cape:** Amatola Mountains, Hogsback, 32°36′17.1″S, 26°56′34.8″E, Mar. 25–27, 2007, leaf litter, afromontane forest (C. Haddad, PPRI PBI_OON 8943, 34256), 1♂, 3♀. **Western Cape:** Cape of Good Hope Nature Reserve, Olifantsbos near Skaife Centre, 34°15.76′S, 18°23.13′E, Oct. 1998, Winkler trap, leaf litter, dense bush, strandveld/mountain fynbos ecotone, elev. 20 m (H. Robertson, SAM PBI_OON 28906, 29044, 34129, 34140, 34147, 34150, 34171, 34177, 34182, 34196, 34248), 12♂, 4♀; Cape of Good Hope Nature Reserve, Teeberg, Oct. 1998, on NE rocky slope, mesic mountain fynbos (H. Robertson, SAM PBI_OON 28857), 1♀.

DISTRIBUTION: Eastern and Western Cape, South Africa.

Australoonops haddadi, new species
Figures 821–843

TYPE: Male holotype taken in a pitfall trap in coastal woodland at Inhaca, Maputo, Mozambique (Apr. 30–May 14, 1994; T. Steyn), deposited in MRAC (209751, PBI_OON 29087).

ETYMOLOGY: The specific name is a patronym in honor of Charles Haddad, collector of this and many other rare South African oonopids.

DIAGNOSIS: The elevated portion of the pars cephalica is smooth (figs. 825, 839); males have a dorsally curved embolus tip (figs. 828–833), and females have the posterior portion of the anterior receptaculum relatively wide and squared (figs. 842, 843).

MALE (PBI_OON 29087, figs. 821–833): Total length 1.91. Elevated portion of pars cephalica smooth. Endites with oblique depression. Embolus with curved tip, secondary process long (figs. 828–833).

FEMALE (PBI_OON 8945, figs. 834–843): Total length 2.56. Posterior receptaculum short, anterior receptaculum basally wider than posterior receptaculum, with anterior projection about as long as basal portion (figs. 842, 843).

OTHER MATERIAL EXAMINED: SOUTH AFRICA: **KwaZulu-Natal:** Ophathe Game Reserve, 4×4 trail near Imfolozi River, 28°22.555′S, 31°23.993′E, July 5, 2007, under rocks (C. Haddad, R. Fourne, PPRI PBI_OON 8945), 2♀.

DISTRIBUTION: Natal and Mozambique; the two known localities are linked by coastal forest (Ophathe is about 30 km inland, but close to the coastal belt, whereas Inhaca is an island only a few km offshore; C. Haddad, in litt.).

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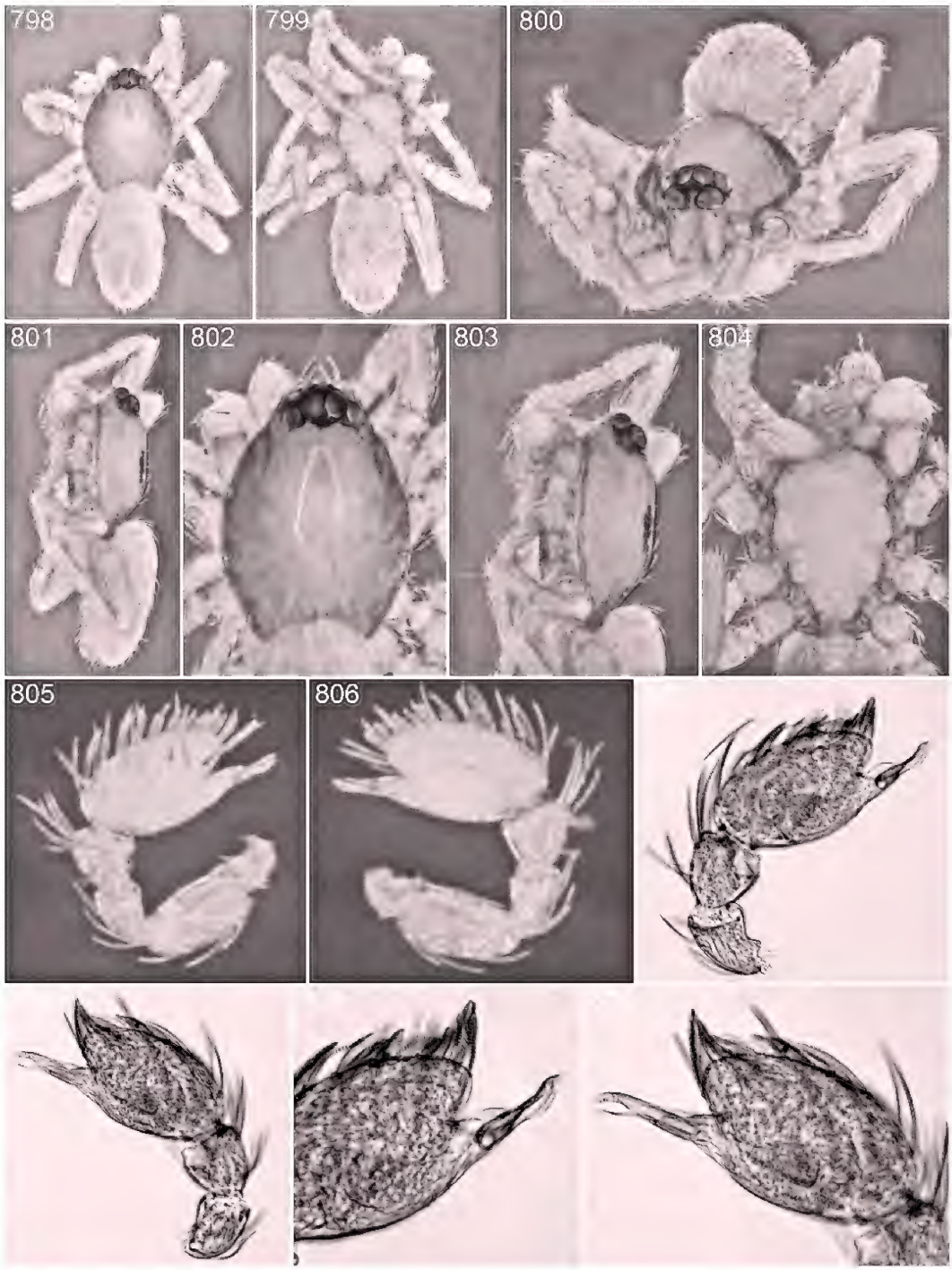
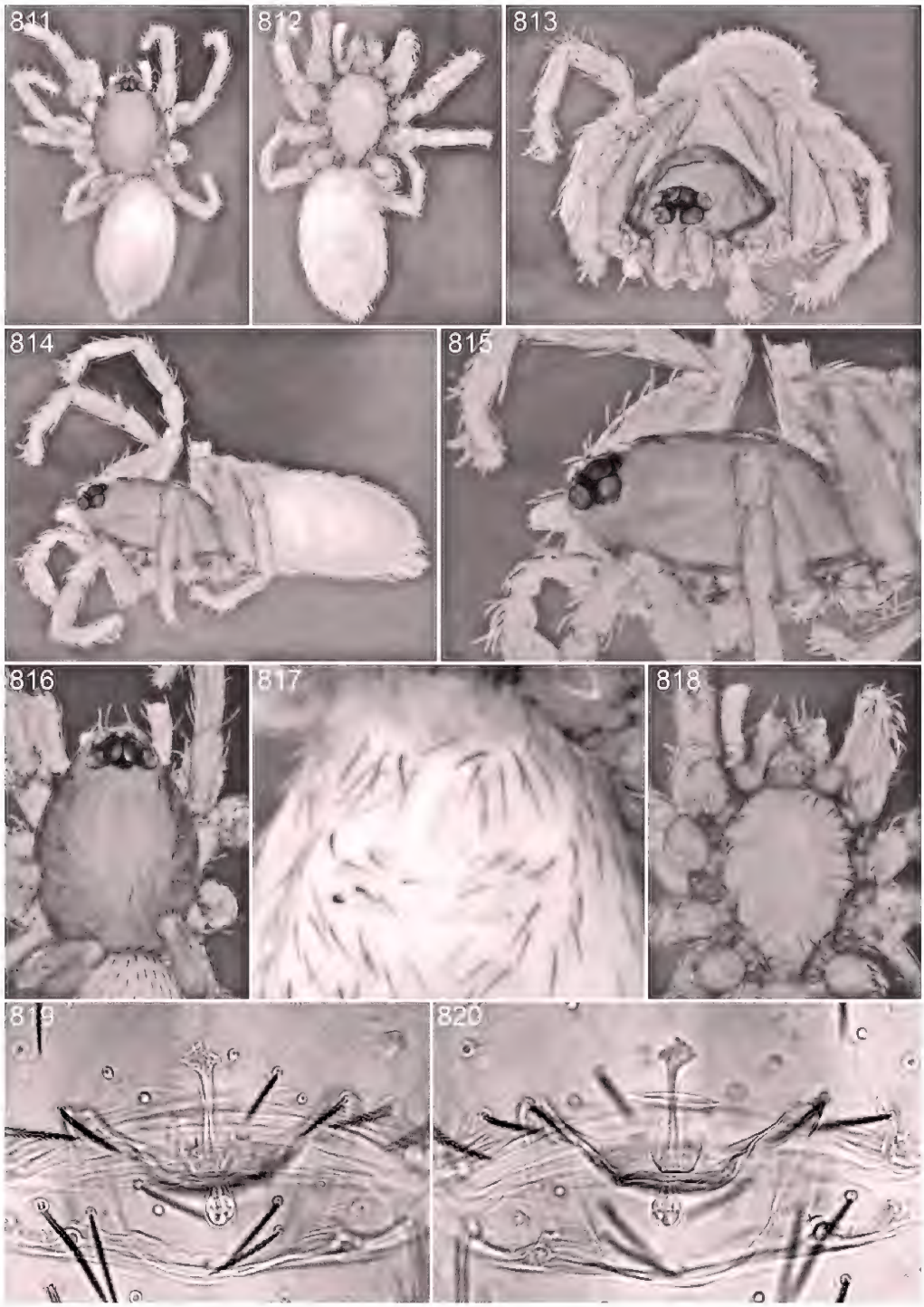
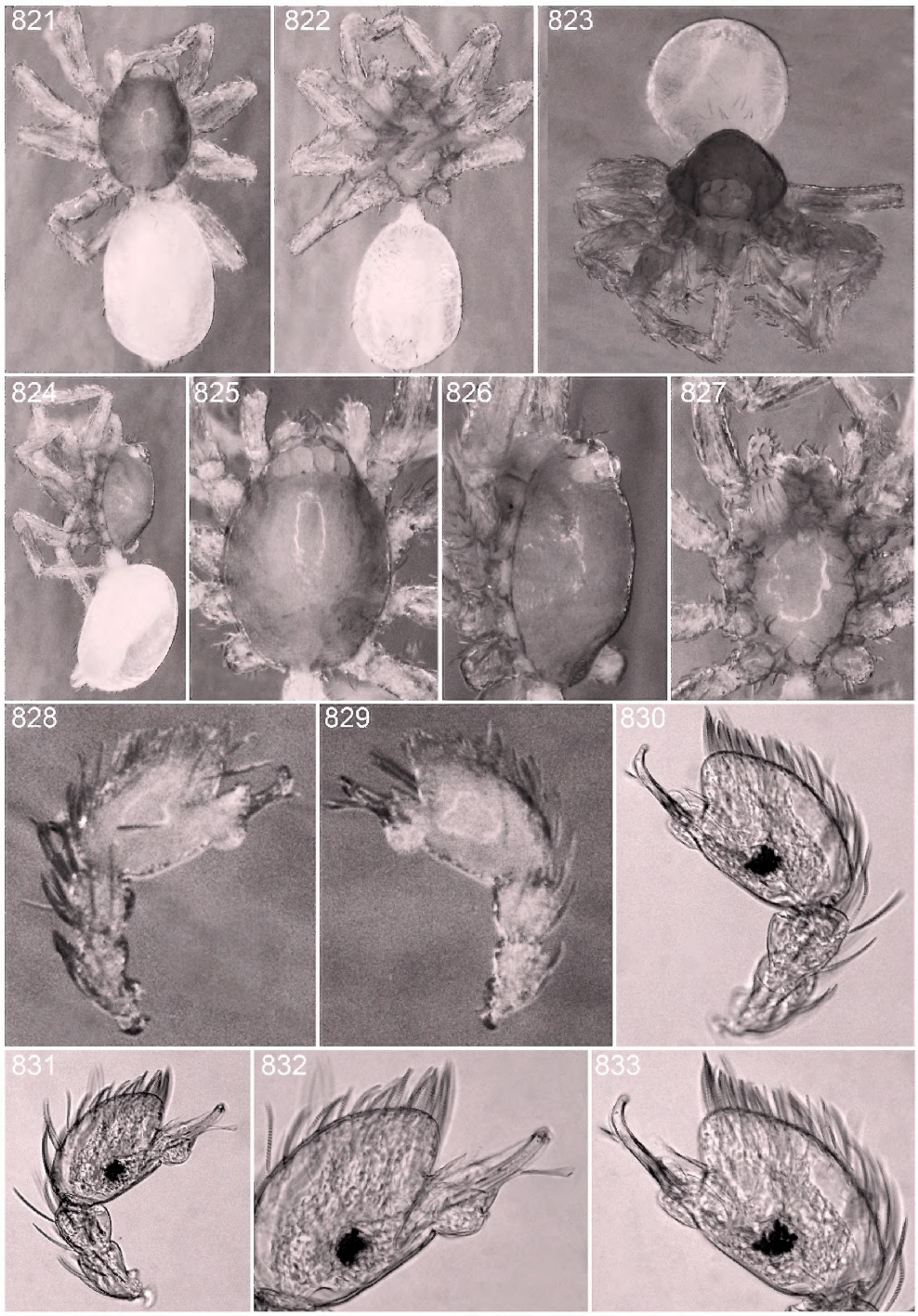


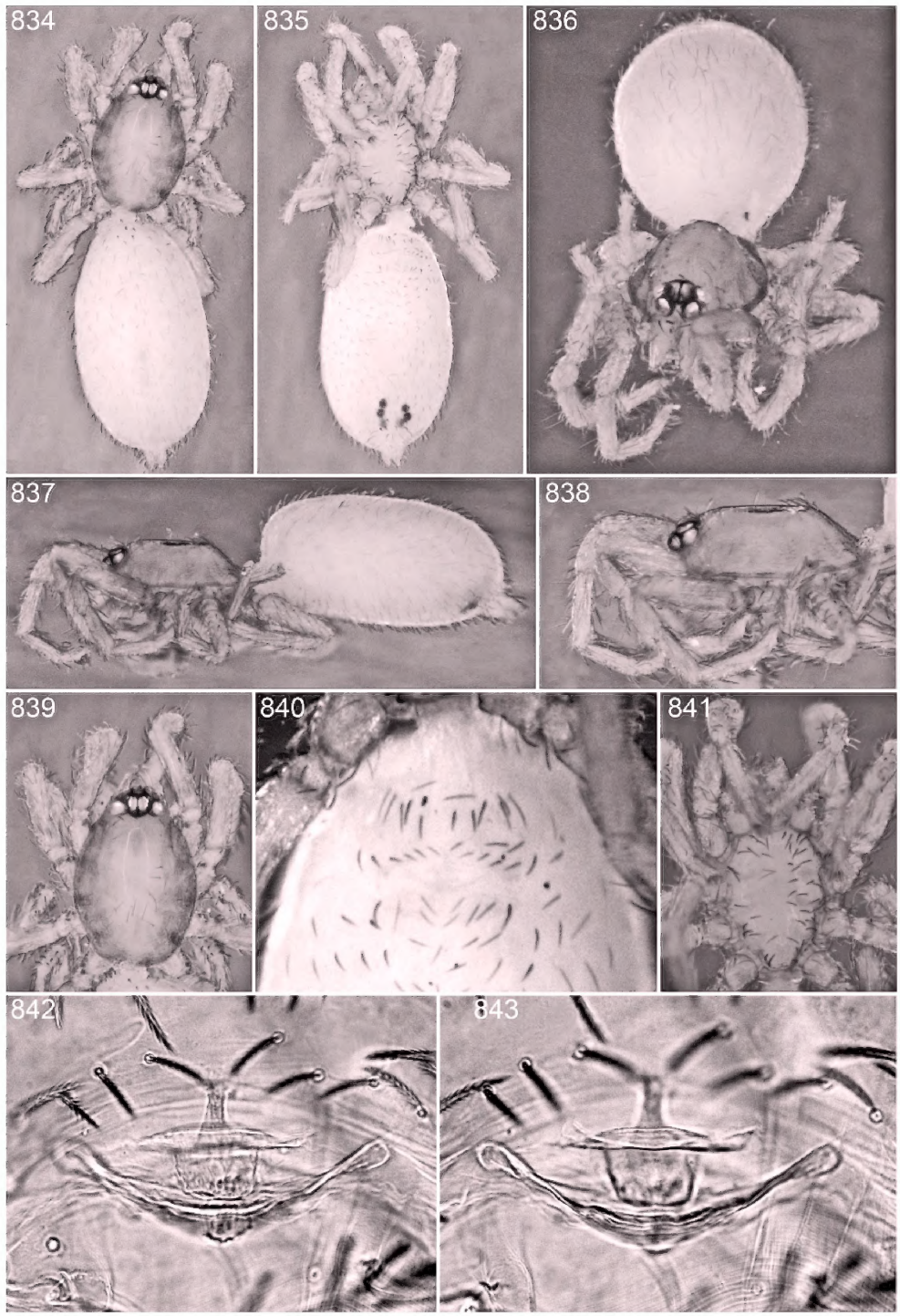
Figs. 798–810. *Australoonops skaife*, new species, male. **798.** Habitus, dorsal view. **799.** Same, ventral view. **800.** Same, anterior view. **801.** Same, lateral view. **802.** Carapace, dorsal view. **803.** Same, lateral view. **804.** Sternum, ventral view. **805.** Left palp, prolateral view (stereoscope). **806.** Same, retrolateral view. **807.** Same, prolateral view (compound microscope). **808.** Same, retrolateral view. **809.** Embolus, prolateral view. **810.** Same, retrolateral view.



Figs. 811–820. *Australoonops skaife*, new species, female. **811.** Habitus, dorsal view. **812.** Same, ventral view. **813.** Same, anterior view. **814.** Same, lateral view. **815.** Carapace, lateral view. **816.** Same, dorsal view. **817.** Epigastric area, ventral view. **818.** Sternum, ventral view. **819.** Genitalia, ventral view. **820.** Same, dorsal view.



Figs. 821–833. *Australoonops haddadi*, new species, male. **821.** Habitus, dorsal view. **822.** Same, ventral view. **823.** Same, anterior view. **824.** Same, lateral view. **825.** Carapace, dorsal view. **826.** Same, lateral view. **827.** Sternum, ventral view. **828.** Left palp, prolateral view (stereoscope). **829.** Same, retrolateral view. **830.** Same (compound microscope). **831.** Same, prolateral view. **832.** Embolus, prolateral view. **833.** Same, retrolateral view.



Figs. 834–843. *Australoonops haddadi*, new species, female. **834.** Habitus, dorsal view. **835.** Same, ventral view. **836.** Same, anterior view. **837.** Same, lateral view. **838.** Carapace, lateral view. **839.** Same, dorsal view. **840.** Epigastric area, ventral view. **841.** Sternum, ventral view. **842.** Genitalia, ventral view. **843.** Same, dorsal view.

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INDEX OF SPECIFIC NAMES

alazan, 20
angustatus, 4
aurantiacus, 4
belmopan, 20
bicolor, 75
bimini, 35
cabo, 20
canita, 31
centralis, 4
chickeringi, 75
cletus, 9
dimotus, 40
econotus, 9
egenulus, 9
exgord, 63
gorda, 86
granulatus, 96
haddadi, 105
halatus, 9
hoffi, 9
insolitus, 40
jara, 45
kochalkai, 31
lucradus, 9
luquillo, 45
macabus, 45
mandeville, 40
minuta, 9
modestus, 4
murphyorum, 20
nitens, 9
noctucus, 9
opisthornatus, 9
padiscus, 86
peckorum, 10
petrunkevitchi, 26
phonetus, 9
portoricensis, 9
pretiosus, 50
reducta, 9
saba, 63
saintjohn, 50
scabriculus, 63
simla, 71
skaife, 105
tayrona, 31
tortola, 63